EVC Network Master Station

Installation Guide

Date: July 2023
Document: EF.CRISISEVCNMSIG
Issue: 1.0

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Scope

The Crisis EVC Network Master Station Installation Guide provides a comprehensive description of the Crisis Emergency Voice Communication System.

This guide introduces the Crisis EVC Master Station features, technical specifications and gives an understanding of its components and their function. You will also find instructions on installing, configuration and testing.

This guide is for anyone involved with the design, maintenance and purchasing of a Crisis EVC system. It is assumed that anyone using this product has the knowledge and appropriate certification from local fire and electrical authorities.

Document Conventions

The following typographic conventions are used in this document:

Convention	Description
Bold	**Used to denote:** Emphasis.
Italics	**Used to denote:** References to other parts of this document or other documents.

The following icons are used in this document:

Convention	Description
	Recommended guideline: Advising to do so.
	Caution: Not appropriate to do so or; care taken to avoid danger or mistakes.

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1 Introduction

1.1 What is an Emergency Voice Communication System?

An Emergency Voice Communication System, or EVCS, is a system that allows voice communication in either direction between a central control point and a number of other points throughout a building or building complex, particularly in a fire emergency situation. The control points, or outstations by which they are more commonly referred, generally comprise of a Type A outstation, a Type B outstation, or a Type C Combined Type outstation. “Assist Call” emergency assistance alarm systems can also be incorporated into the EVCS.

EVCS is generally required in the following situations:

- In any building or sports or similar venue where there are disabled people, or people who may have difficulty negotiating the evacuation route.
- In buildings with phased evacuation and/or fire fighting lifts where it facilitates secure communications for building managers, fire wardens, and attending fire officers.
- At sports venues and similar complexes, where it will assist stewards in controlling the evacuation of the area in an emergency.

The Crisis Network Emergency Voice Communications System (EVCS) is designed to fully comply with BS5839 Part 9:2021 for use as a Fire Telephone system, Disabled Refuge Call system or as a combined system when both Fire Telephones and Disabled Refuge Points are required.

1.2 Suitability

Fire telephone systems are recommended for all public buildings and multi-story buildings over four floors that require phased evacuation as per BS9999:2017.

Disabled Refuge systems are required in buildings where the public or staff gains access to any floor other than the ground floor using lifts. A refuge is a relatively safe waiting area provided at each storey exit from each protected stairway.

Refuge areas are not just for wheelchair users, they are for anyone who may need assistance i.e. someone who’s immediate evacuation will impede the egress of others, a pregnant woman over 6 months term or persons with long term injuries, arthritis etc.

2 Product Overview

The Crisis EVCS has been designed around a total network solution, so most Crisis panels have inbuilt networking. The Crisis Network system comprises 3 types of panels; Network touch screen master station (hereafter referred to as Crisis EVC Network Master Station), the 2-to-8-line networkable master station (hereafter referred to as Crisis EVC Master Station) and a system expander panel (hereafter referred to as Crisis EVC Network Expander). For Crisis Network systems a Crisis Network Master Station must be used as the site wide network master station, the system can then be expanded using a Crisis EVC Network Expander or Crisis Master Station in blocks of 8 lines up to a maximum system capacity of 512 lines.

Additional Crisis EVC Network Master Stations can be used wherever indication and control is required, i.e., Fire Control rooms and building reception. These additional Crisis EVC Network Master Stations have the facility to filter the information that is displayed, so if there are several buildings with a Crisis EVC Network Master Station in each building, the Crisis EVC Network Master Station can be configured to only display/answer EVCS calls from that building. The system also has the ability for all calls to be displayed /answered on a particular Crisis EVC Network Master Station thus becoming the overall site master. This display filter can also be applied to “Assist Call” indications so panels can be configured to only display/acknowledge calls from “Assist Call” emergency assistance alarms. This display filtering works in the same manner as for EVCS calls.

Each Crisis EVC Network Master Station can be configured so information displayed during daytime is distinct from information displayed during night-time, thus allowing separate locations to handle daytime operations and night-time operations. The day/night timing applies across the entire network.

The Crisis EVC Network Master Station can call individual outstations via a named directory list or by dialling the appropriate extension number for the desired outstation. In addition to this, it is possible to call from one Crisis EVC Network Master Station to another so communication between master stations is possible and control can be transferred between master stations.

The wiring is a ring and spur topology with outstations being wired on radial spurs from any master station or system expander panel. The Crisis EVC Network Expander and any Crisis EVC Network Master Station or Crisis EVC Master Station are wired in a ring network up to a maximum of 64. The Crisis EVC Network Expander would typically be sited in convenient locations close to the outstations i.e. risers or stairwells resulting in short vertical wiring runs. The Crisis EVC Master Station can be used to provide local control of up to 8 lines within a building that can then report back to a Crisis EVC Network Master Station which can provide overall control of an entire site. In this way a very large system can be completed with a minimum of cabling coming back to the master station via the network ring.

Additionally, the “Assist Call” emergency assistance alarm system can either be connected to the same line with an outstation or connected to a dedicated line. As each line is powered from the Crisis EVC Network Master Station or Crisis EVC Network Expander, the outstations and the “Assist Call” emergency assistance alarm system do not require a separate power supply unit. This has the additional benefit of each line being fully monitored and battery backed up.

If only emergency assistance alarms are connected, then a **Crisis EVC Network Assist Call Master Station** can be used. The Crisis EVC Network Assist Call Master Station is very similar to a Crisis EVC Network Master Station, however it does not have a telephone handset and cannot be used to answer EVC calls; it uses the same housing as a Crisis EVC Network Expander panel. The operation and configuration is as described for a Crisis EVC Network Master Station.

3 Crisis Product Range

Part No.	Description
Crisis EVC Standalone Master Station	
36-120	Crisis EVC Standalone Master Station, 2 Lines, Handset
36-121	Crisis EVC Standalone Master Station, 4 Lines, Handset
36-122	Crisis EVC Standalone Master Station, 8 Lines, Handset
36-120-SS	Crisis EVC Standalone Master Station, 2 Lines, Handset, Stainless Steel Fascia
36-121-SS	Crisis EVC Standalone Master Station, 4 Lines, Handset, Stainless Steel Fascia
36-122-SS	Crisis EVC Standalone Master Station, 8 Lines, Handset, Stainless Steel Fascia
Crisis EVC Master Station	
36-103	Crisis EVC Master Station, 8 Lines, Handset
36-100	Crisis EVC Repeater, Handset
36-103-SS	Crisis EVC Master Station, 8 Lines, Handset, Stainless Steel Fascia
Crisis EVC Remote Alarm Panel	
36-113	Crisis EVC Remote Alarm Panel
Crisis EVC Network Master Station	
36-200	Crisis EVC Network Master Station, 8 Lines, Handset
36-201	Crisis EVC Network Repeater, Handset
36-200-SS	Crisis EVC Network Master Station, 8 Lines, Handset, Stainless Steel Fascia
36-201-SS	Crisis EVC Network Repeater, Handset, Stainless Steel Fascia
Crisis EVC Network Expander	
36-204	Crisis EVC Network Expander, 8 Lines
Crisis EVC Network Assist Call Master Station	
36-202	Crisis EVC Network Assist Call Master Station, 8 Lines
Crisis EVC Network Assist Call Repeater	
36-203	Crisis EVC Network Assist Call Repeater
Crisis EVC Battery Enclosure	
36-212	Crisis EVC Battery Enclosure
Crisis EVC Panel Peripherals	
36-112	Crisis EVC 2 Line Card
Crisis EVC Panel Accessories	
36-111	Crisis EVC Master Station Stainless Steel Flush Mount Bezel
36-114	Crisis EVC Network Expander / Assist Call Stainless Steel Flush Mount Bezel
Crisis Outstations	
36-310	Crisis Type A Fire Telephone, Red
36-300	Crisis Type A Fire Telephone, Stainless Steel
36-313	Crisis Type B Refuge Outstation, Green
36-301	Crisis Type B Refuge Outstation, Stainless Steel
36-302	Crisis Combined Type A & B Outstation
36-303	Crisis Type B Induction Loop Outstation, Flush
36-304	Crisis Type B Induction Loop Outstation, Surface
36-305	Crisis Type A Weatherproof Fire Telephone
36-306	Crisis Type B Weatherproof Refuge Outstation
36-307	Crisis Roaming Fire Telephone
36-308	Crisis Jack Point Plate
36-312	Crisis Jack Point Plate, Signalling Volt Free Contact

Crisis Outstation Accessories	
36-309	Crisis Type A Station Stainless Steel Flush Mount Bezel
36-311	Crisis Type A Station Steel Flush Mount Bezel, Red
36-804	Crisis Type B Refuge Outstation Back Box, Green
36-801	Crisis Type B Refuge Outstation Back Box with Knock Outs, Grey
36-803	Crisis Type B Refuge Outstation Dry Lining Back Box
Crisis Assist Call	
36-400	Crisis Assist Call WC Kit
36-401	Crisis Assist Call Accessible Bedroom Kit
36-402	Crisis Assist Call Over Door Plate
36-403	Crisis Assist Call Cancel Plate
36-404	Crisis Assist Call Ancillary Cancel Plate
36-405	Crisis Assist Call Plate
36-406	Crisis Assist Call Pull Cord Plate
36-408	Crisis Assist Call Pull Cord Plate, Anti-ligature Antimicrobial Cord
36-407	Crisis Assist Call Interface Plate
36-420	Crisis Assist Call Weatherproof Cancel Button
36-421	Crisis Assist Call Weatherproof Call Button
36-422	Crisis Assist Call Weatherproof Mushroom Call Button

Table 1: Crisis Product Range

4 Important Safety Information

This Equipment must only be installed and maintained by a suitably skilled and competent person.

This Equipment is defined as Class 1 in EN60065 (Low Voltage Directive) and must be EARTHED.

⚠	**Caution: Indoor Use Only** **Warning: Shock Hazard - Isolate Before Opening** **Warning: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE** **Warning: THIS UNIT MUST BE EARTHED** **Warning: NO USER SERVICEABLE PARTS**

Each Crisis EVC Network Master Station, Crisis EVC Network Expander and Crisis EVC Master Station requires local isolation with verification as per the Electricity at Work Regulations 1989, returning to a B6A breaker clearly marked "**EMERGENCY VOICE COMMUNICATION SYSTEM. DO NOT TURN OFF**".

If the Crisis EVC Network Master Station, Crisis EVC Master Station and the Crisis EVC Network Expander are distributed around a site, it is essential that all panels are on the same mains phase, as they are classified TEN 230V. Powering from different phases can mean a 440V potential can be present in a panel during a major fault incident.

Anti-static handling guidelines

Make sure that electrostatic handling precautions are taken immediately before handling PCBs and other static sensitive components.

Before handling any static-sensitive items, operators should get rid of any electrostatic charge by touching a sound safety earth. Always handle PCBs by their sides and avoid touching any components.

4.1 Unpacking

Remove the Crisis EVC Network Master Station from its packing, and check the contents against the following list:

- Crisis EVC Network Master Station
- Quickstart Guide
- Accessory Pack:
  - 1 x 2.5mm AF Hex Key
  - 1 x Battery Lead
  - 1 x Door Handle/Key
  - 10k End of Line (EOL) Resistors, 2 per Line Card
  - Micro USB SD Card Reader

Figure 1: Crisis EVC Network Master Station Front

Use the 2.5mm AF Hex Key supplied to open the right-hand front cover.

Verify the following items are present:

- 4 x Line Cards
- 1 x 3-way Mains Connector
- 1 x 2-way Fault Connector
- 1 x 2-way In Use Connector
- 1 x 2-way Enable Connector
- 4 x 2-way Network Connectors
- 1 x Battery Lead

If there are any items missing, please contact your supplier or Eurofyre Limited, quoting the unit serial number and the name on the packing list enclosed, so the situation can be rectified.

5 Installation

5.1 Connecting the Crisis EVC Network Master Station

To comply with EMC (Electro Magnetic Compatibility) regulations and to reduce the risk of electrical interference in the system wiring, the use of fire-resistant screened cables is recommended throughout the installation.

All wiring should come into the enclosure via the knockouts provided, and be fixed tidily to the relevant terminals.

⚠	**Correct cable glanding is essential. Due regard should be paid to any system specifications which demand a certain cable type, providing it meets the appropriate national wiring regulations.**

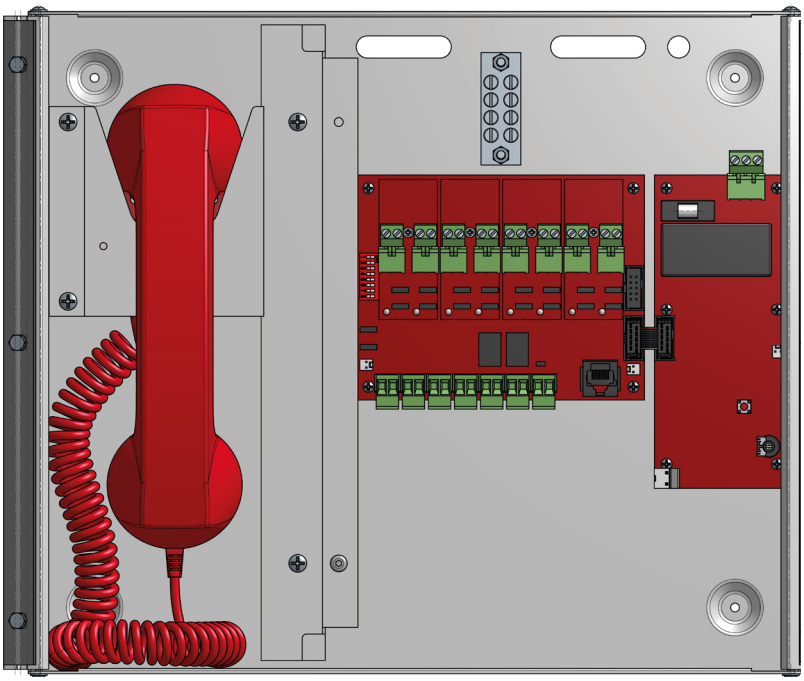


Figure 2: Crisis EVC Network Master Station Internals

Prior to mounting the Crisis EVC Network Master Station, it should be decided if the field wiring is to be run on the surface or concealed. There are 14 knockouts on the top and 2 slotted entries with a dedicated mains supply entry at the rear. If a knockout is removed by mistake, fill the hole with a good quality cable gland.

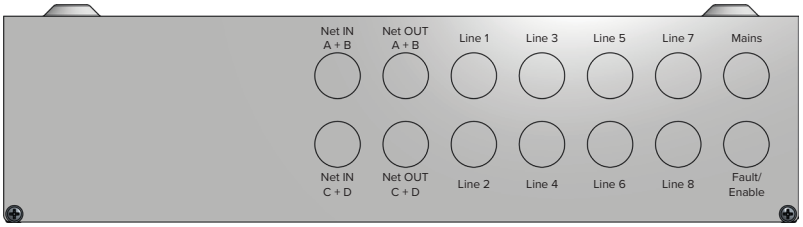


Figure 3: Crisis EVC Network Master Station Top Entries

Unused knockouts must be left unopened to comply with the Low Voltage Directive. Accidentally knocked out holes should be blanked off.

The Crisis EVC Network Master Station weighs 6kg with batteries, so care should be taken to securely mount the Station on stud walling.

5.2 Planning the Wiring

All system wiring should be installed to meet the appropriate parts of BS5839 Part 9:2021 and BS7671 (Wiring Regulations). Other national standards of installation should be adhered to where applicable.

⚠	**Do not test wiring using an insulation tester (Megger) with any equipment connected, as the 500 Volt test voltage will destroy these devices.**

You must observe local wiring regulations. Do not run SELV and LV cables in the same enclosure without adequate insulation between them.

5.3 Cable and Wiring Guidance

5.3.1 Fire Telephone System

Any system using Type A outstations must use enhanced grade cabling throughout for all wiring, including the mains supply to the Crisis EVC Network Master Station/Crisis EVC Network Expander.

5.3.2 Disabled Refuge EVC System

For buildings less than 30m in height, or any building with sprinklers fitted, and the planned evacuation will be completed within 30 minutes, then standard grade fire resistant cable may be used to wire Type B outstations and the mains supply to the Crisis EVC Network Master Station/Crisis EVC Network Expander.

If the building is over 30m in height without sprinklers, or where the planned evacuation will take place over multiple stages exceeding 30 minutes, then enhanced grade cables must be used.

5.3.3 Combined Systems

For systems containing Type A, Type B or Type C outstations, shared cable such as network cables must be enhanced grade.
Cabling to Type A or Type C outstations must be in enhanced grade fire resistant cabling.

Individual spurs to Type B outstations can be wired in standard grade fire resistant cabling in accordance with the wiring guidelines already set out for disabled refuge systems.

5.3.4 “Assist Call” Emergency Assistance Alarm Systems

All installations must conform to Building Regulations Approved Document M and BS8300. The “Assist Call” is wired using 2-core cable, and the “Assist Call” plates can be wired in any order.

5.3.5 “Assist Call” Cabling Methods

There are two ways to integrate Assist call systems into the EVCS panels as shown below:

- Connection to a Type B outstation: use 2 core standard grade fire resistant cable, connecting to the EOL out connection of the type B outstation and placing the end of line resistor in the last ”Assist Call” device on the line.
- Connecting an “Assist Call” system to a dedicated line requires 2 core 1mm CSA or above LSF sheathed. The maximum conductor resistance is 5 ohm per leg for proper operation. The end of line is placed in the last “Assist Call” device on the line for ease of fault finding.

5.3.6 Crisis EVC Network Master Station Wiring

The wiring for a Crisis EVC Network Master Station is shown in the schematic below.

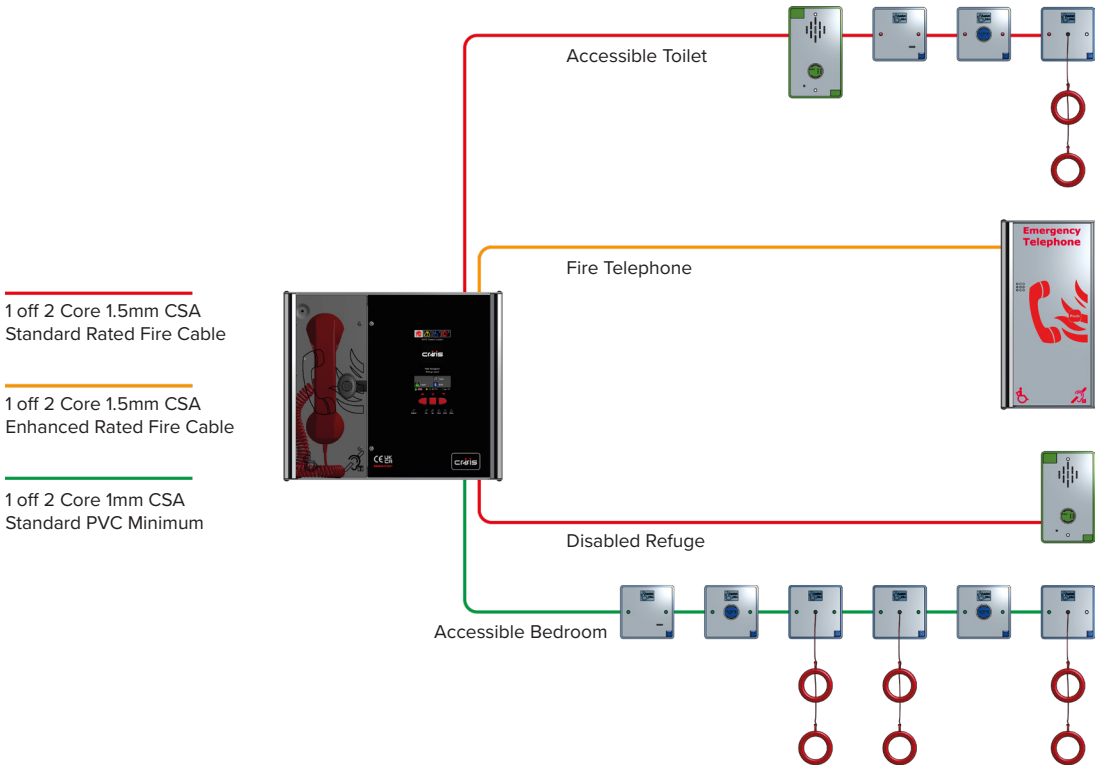


Figure 4: Typical Wiring Diagram - Crisis EVC Network Master Station

5.3.7 Crisis EVC Network Master Station & Expander Panel - Ring Wiring

If more than 8 lines are required then a Crisis EVC Network Expander will be required in addition to the Crisis EVC Network Master Station, with the outstations shared between both the Crisis EVC Network Master Station and the Crisis EVC Network Expander. The system must be wired as a ring as shown in the schematic below. This ensures that the loss of any single cable will not affect the operation of more than one outstation.

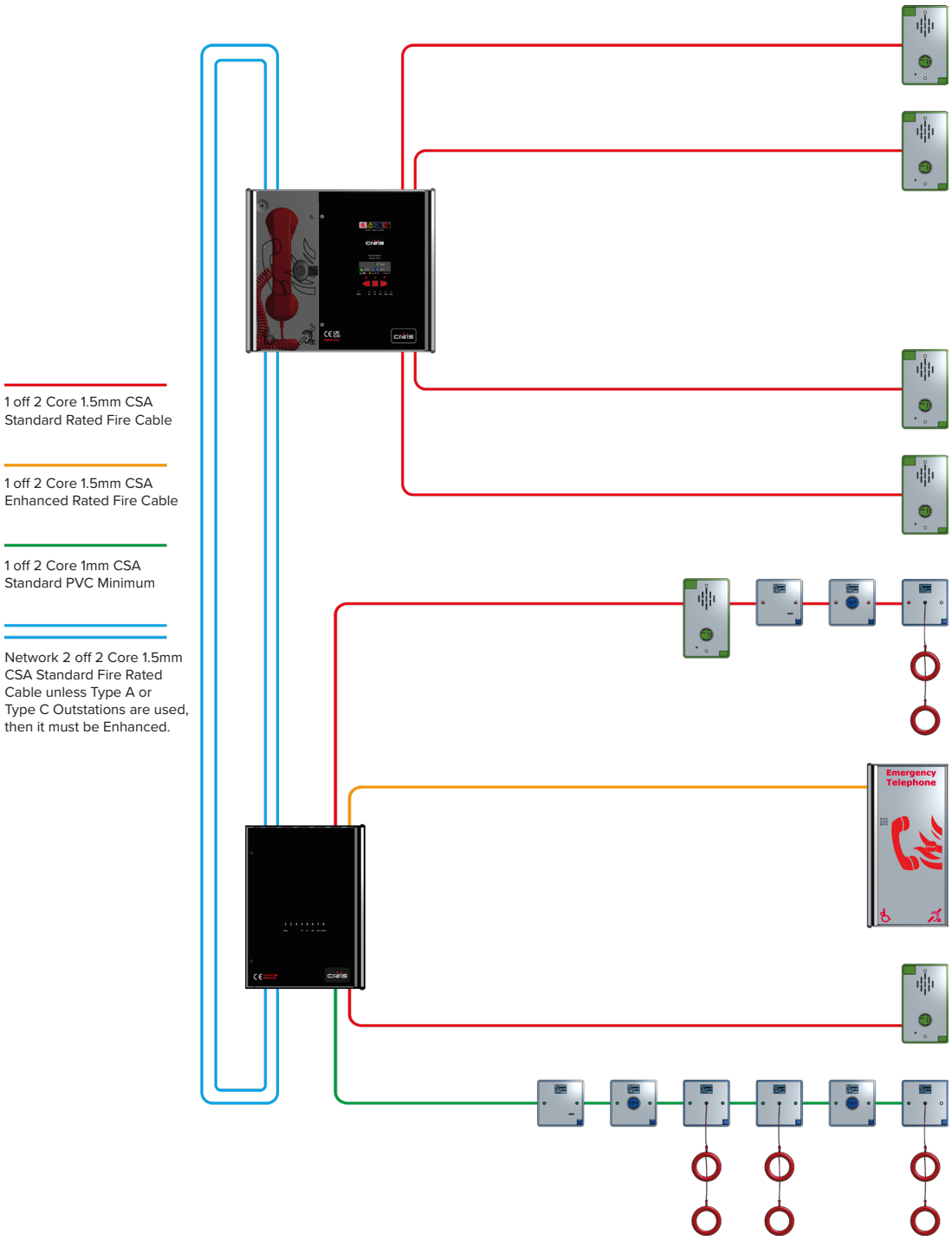


Figure 5: Typical Ring/Network Wiring Diagram - Crisis EVC Network Master Station & Expander

5.3.8 Crisis EVC Network Wiring

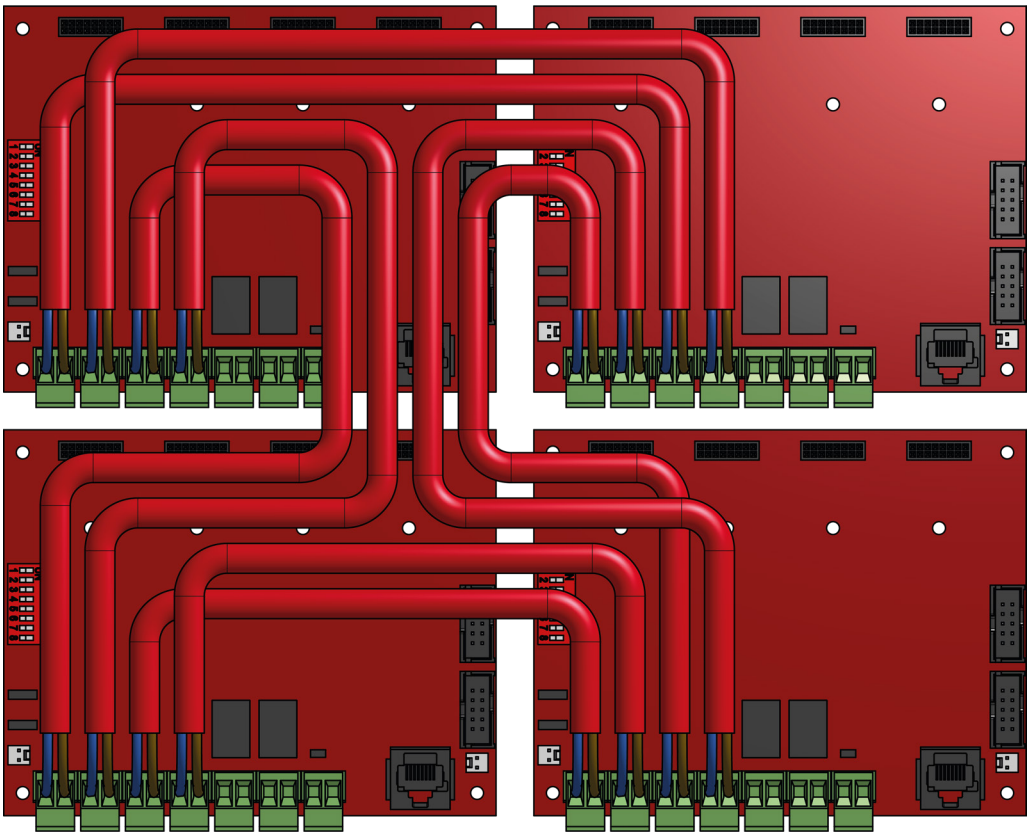


Figure 6: Typical Network Connection Diagram - Crisis EVC Network Master Station

⚠	**Only connect the earth screens on the Net in cables, cut back and insulate Net OUT earth screens.**

5.3.9 Mains Connection

Each Crisis EVC Network Master Station, Crisis EVC Network Expander, and Crisis EVC Master Station panel requires local isolation with verification as per the Electricity at Work Regulations 1989, returning to a B6A breaker clearly marked '**EMERGENCY VOICE COMMUNICATION SYSTEM. DO NOT TURN OFF**'.

If there are Crisis EVC Network Master Station, Crisis EVC Network Expander, and Crisis EVC Master Station panels distributed around a site, it is essential that all panels are on the same mains phase, as they are classified TEN 230V. Powering from different phases can mean a 440V potential can be present in a panel during a major fault incident.

5.4 Battery Information

In the event of mains failure, BS5839 Part 9:2021 requires battery backup for 24 hours standby and 3 hours operation thereafter.

A Crisis EVC Network Master Station requires **one number** 12V 7ah vent regulated sealed lead acid battery. The battery is not supplied with the Crisis EVC Network Master Station.

⚠	**Safety Information:** Sealed Lead Acid batteries contain sulphuric acid which can cause burns if exposed to the skin. The low internal resistance of these batteries mean large currents will flow if they are accidentally short-circuited causing burns and a risk of fire. *Exercise caution when handling batteries.* **Power Up Procedure:** Always apply mains power before connecting batteries. When connecting batteries, always connect the Positive (Red +) terminal first. **Power Down Procedure** Disconnect the batteries before removing the mains power. When disconnecting batteries, always remove the Negative (Black –) terminal first.

5.5 Outstation Connections

The Crisis EVC Network Master Station and Crisis EVC Network Expander are configured via the configuration spreadsheet contained on the Micro SD card supplied with the Crisis EVC Network Master Station, for configuration (see 7.2 Configuration Procedure).

The following devices are available on the system:

- Type A (fire telephone)
- Type B (hands-free refuge point)
- Type C 'Combi' (combined Type A and Type B)
- Jack Point
- 'Assist Call' emergency assistance alarm system

For Type A, Type B, and Type C outstations, the end-of-line 10kΩ resistor should be removed from the accessory pack and connected to the end-of-line terminal in the outstation.

For Jack points and the “Assist Call” system, the end-of-line 10kΩ resistor should also be removed from the accessory pack and connected to the last plate on the system.

5.5.1 Type A Outstation

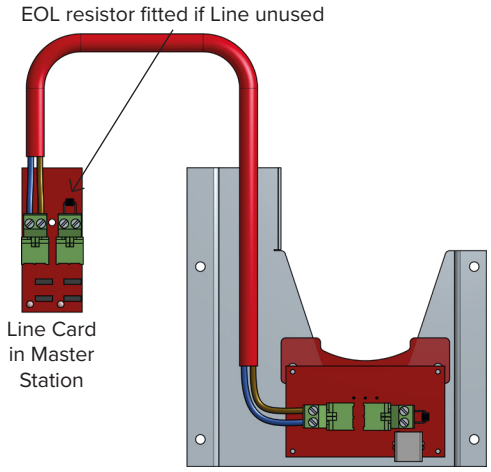


Figure 7: Type A Outstation Wiring Diagram

⚠	**The Earth screen should be sleeved and connected to the terminal block in the controller, and the earth stud in the Type A outstation.**

5.5.2 Type B Outstation

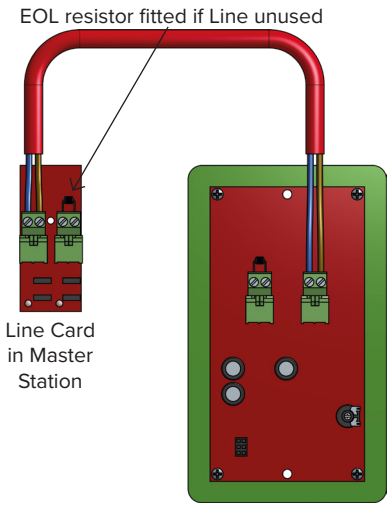


Figure 8: Type B Outstation Wiring Diagram

⚠	**The Earth screen should be sleeved and connected to the terminal block in the controller, and the earth connection in the metal back box (if a plastic back-box is used cut the earth back and insulate at the outstation).**

5.5.3 Accessible Toilet Kit

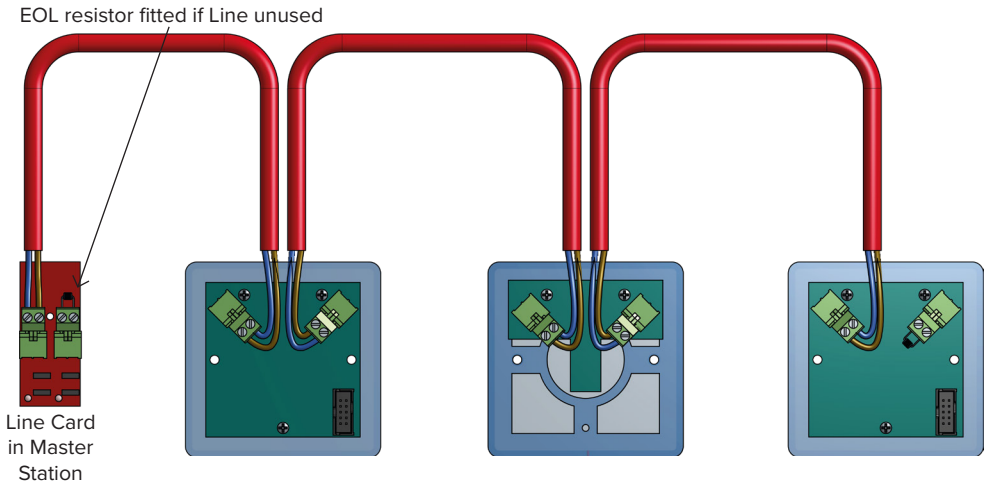


Figure 9: Accessible Toilet Kit Wiring Diagram

The Crisis Assist Call WC kit comprises an Over Door Plate, a Pull Cord, and a Cancel Plate. The above order is a typical order; with the Over Door Plate, Pull Cord and the Cancel Plate connected as shown, but the plates can be wired in any order, as long as the EOL resistor goes into the free terminal of the last plate.

5.5.4 Enable Switch Input

Event Mode is used for large event or sports stadia, it s function is to provide the event safety/security management a single point of control. The Switch input is used for remote enabling or disabling of panels and only has to be activated at one point. Typically this might be the located in the Police Control Room at a football stadium or a racecourse. The input is monitored, and expects a 470R resistor for activating. A 10K EOL resistor for the unit is supplied with the panel.

5.6 Auxiliary Connections

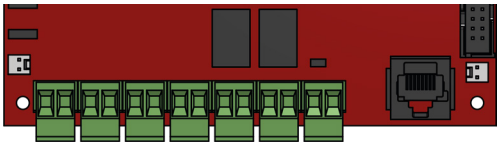


Figure 10: Auxiliary Connections

The Crisis EVC Network Master Station has three auxiliary connections:

Fault is a normally closed volt free relay (30V DC 1A) which OPENS on any fault, including loss of power.

In Use is a normally OPEN volt free relay (30V DC 1A) connection. The relay CLOSES when configured to do so by the Crisis EVC Network Master Station (see 8.28.1), usually when an outstation on the network is operated.

Enable is a normally CLOSED input, and is required to operate the system, this is often connected to the fire alarm system. If Jumper J9 is in place, then no connection is required at the terminals.

✓	**It is advised that this feature is not used as the system should always be available, not just during an evacuation.**

If this function is used, then the removal of Jumper J9 and opening the Enable input, will not display incoming calls from Type B outstations only. Calls from Type B outstations automatically 'time out' after approximately 30 minutes. Type A outstations and 'Assist Call' emergency assistance alarm systems will continue to operate. If this feature is utilised, then the mode LED illuminates yellow after 30 seconds to show that the system is disabled.

⚠	**If the system is disabled, the master station can still make outgoing calls.**

If this function is used, it only requires connection with one panel on the network. If the **Enable** input is CLOSED on one panel, then all panels on the network are CLOSED. To disable Type B outstations, then the **Enable** input on all panels on the network must be OPEN.

5.7 Powering Up Procedure

Before powering up the EVC Network Master Station or Expander Panel, carefully check all internal wiring. To power up the Crisis EVC Network Master Station/Crisis EVC Network Expander:

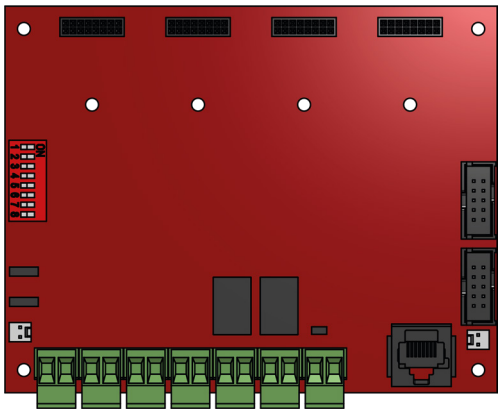
1. Apply mains power first.
2. Connect the battery using the battery leads supplied. Always connect the Positive (Red +) terminal first before connecting the Negative (Black -) terminal.

5.8 Powering Down Procedure

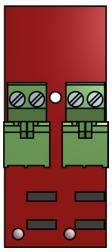
To power down the Crisis EVC Network Master Station:

1. Disconnect the battery. Always disconnect the Negative (Black -) terminal first, before disconnecting the Positive (Red +) terminal.
2. Remove mains power.

6 Hardware Configuration Procedure



Exchange PCB



Line PCB

Figure 11: Exchange and Line PCB Diagram

6.1 Adding a Line Card

Before adding a Line Card, ensure that the Crisis EVC Network Master Station is not powered. If the Crisis EVC Network Master Station is powered, then power down the panel (see 5.8 Powering Down Procedure).

To fit the Line Card:

1. Place Line Card in the next available space on the Exchange PCB and secure using the supplied screw.
2. Remove a terminal from the Line Card for each outstation to be fitted.
3. Connect the field wiring for the outstation to the terminal.
4. Push the terminal into the correct position on the Line Card.
5. Update the site configuration (see 7.2 Configuration Procedure).

6.2 Removing a Line Card

Before removing a Line Card, ensure that the EVC Network Master Station is not powered. If the Master Station is powered, then power down the Panel, see 5.8.

To remove the Line Card:

1. Remove all terminals from the Line Card that are wired to an outstation.
2. Remove screw securing the Line Card.
3. Remove Line Card from Exchange PCB.
4. Update the site configuration (see 7.2 Configuration Procedure).

6.3 Adding a Crisis EVC Network Master Station

Install the Crisis EVC Network Master Station panel as per the relevant parts in the section 6 Installation.

The Crisis network can consist of Crisis EVC Network Master Station, Crisis EVC Network Expander and Crisis EVC Master Station panels. Each Crisis EVC Network Master Station, Crisis EVC Network Expander, and Crisis EVC Master Station panel has in-built networking that allows each panel to be connected to the Crisis network. The panel added to the network must be wired as a ring (see 5.3.7), it cannot be spurred off. This is due to the ability for outstations to be wired from any panel therefore there is no loss of functionality due to cable faults as a ring provides redundancy.

Network connections used are Network Out and Network In, with Network In on one Station wired to Network Out on the other Station (A to A, B to B, C to C, and D to D).

The default network address setting for the Crisis EVC Network Master Station/Crisis EVC Network Expander is 1.

When adding a Crisis EVC Network Master Station, it must have a unique network address. The site configuration must be updated to include the panel added (see 7.2 Configuration Procedure).

If the site configuration is not updated, the panel will not be seen by the rest of the network and importantly any outstations connected to that panel will not operate as they will not be seen by the rest of the network.

6.4 Master Station Exchange PCB Dipswitch Settings

The Crisis network is formed from Crisis EVC Network Master Stations, Crisis EVC Expander Panels, and Crisis EVC Master Stations. Each panel on the network must have a unique network address. This address is set by the dipswitches on the Exchange PCB. The address is a binary number given by the positions of dip switches 1 to 6, with valid addresses lying between 1 and 64 inclusive.

Addr	1	2	3	4	5	6
1	OFF	ON	ON	ON	ON	ON
2	ON	OFF	ON	ON	ON	ON
3	OFF	OFF	ON	ON	ON	ON
4	ON	ON	OFF	ON	ON	ON
5	OFF	ON	OFF	ON	ON	ON
6	ON	OFF	OFF	ON	ON	ON
7	OFF	OFF	OFF	ON	ON	ON
8	ON	ON	ON	OFF	ON	ON
9	OFF	ON	ON	OFF	ON	ON
10	ON	OFF	ON	OFF	ON	ON
11	OFF	OFF	ON	OFF	ON	ON
12	ON	ON	OFF	OFF	ON	ON
13	OFF	ON	OFF	OFF	ON	ON
14	ON	OFF	OFF	OFF	ON	ON
15	OFF	OFF	OFF	OFF	ON	ON
16	ON	ON	ON	ON	OFF	ON
17	OFF	ON	ON	ON	OFF	ON
18	ON	OFF	ON	ON	OFF	ON
19	OFF	OFF	ON	ON	OFF	ON
20	ON	ON	OFF	ON	OFF	ON
21	OFF	ON	OFF	ON	OFF	ON
22	ON	OFF	OFF	ON	OFF	ON
23	OFF	OFF	OFF	ON	OFF	ON
24	ON	ON	ON	OFF	OFF	ON
25	OFF	ON	ON	OFF	OFF	ON
26	ON	OFF	ON	OFF	OFF	ON
27	OFF	OFF	ON	OFF	OFF	ON
28	ON	ON	OFF	OFF	OFF	ON
29	OFF	ON	OFF	OFF	OFF	ON
30	ON	OFF	OFF	OFF	OFF	ON
31	OFF	OFF	OFF	OFF	OFF	ON
32	ON	ON	ON	ON	ON	OFF

Addr	1	2	3	4	5	6
33	OFF	ON	ON	ON	ON	OFF
34	ON	OFF	ON	ON	ON	OFF
35	OFF	OFF	ON	ON	ON	OFF
36	ON	ON	OFF	ON	ON	OFF
37	OFF	ON	OFF	ON	ON	OFF
38	ON	OFF	OFF	ON	ON	OFF
39	OFF	OFF	OFF	ON	ON	OFF
40	ON	ON	ON	OFF	ON	OFF
41	OFF	ON	ON	OFF	ON	OFF
42	ON	OFF	ON	OFF	ON	OFF
43	OFF	OFF	ON	OFF	ON	OFF
44	ON	ON	OFF	OFF	ON	OFF
45	OFF	ON	OFF	OFF	ON	OFF
46	ON	OFF	OFF	OFF	ON	OFF
47	OFF	OFF	OFF	OFF	ON	OFF
48	ON	ON	ON	ON	OFF	OFF
49	OFF	ON	ON	ON	OFF	OFF
50	ON	OFF	ON	ON	OFF	OFF
51	OFF	OFF	ON	ON	OFF	OFF
52	ON	ON	OFF	ON	OFF	OFF
53	OFF	ON	OFF	ON	OFF	OFF
54	ON	OFF	OFF	ON	OFF	OFF
55	OFF	OFF	OFF	ON	OFF	OFF
56	ON	ON	ON	OFF	OFF	OFF
57	OFF	ON	ON	OFF	OFF	OFF
58	ON	OFF	ON	OFF	OFF	OFF
59	OFF	OFF	ON	OFF	OFF	OFF
60	ON	ON	OFF	OFF	OFF	OFF
61	OFF	ON	OFF	OFF	OFF	OFF
62	ON	OFF	OFF	OFF	OFF	OFF
63	OFF	OFF	OFF	OFF	OFF	OFF
64	ON	ON	ON	ON	ON	ON

Table 2: Master Station Exchange PCB Dip Switch Settings

Dipswitch 7 and 8 are reserved for future expansion.

7 Configuration

7.1 Configuration File

All EVC Network Master Station and Expander Panels on the network are configured from the configuration file (LXConfig.csv) located on the Micro SD Card that is fitted as standard.

The configuration file contains information on general site details, the panels that are present, the lines used by each panel, and which line is controlled, by which panel. The configuration file is generated from the supplied spreadsheet. This spreadsheet is available in both Apache Open Office Calc format, and Microsoft Excel format. All details are entered into the appropriate spreadsheet.

⚠	In Excel use the save as option and set the [Save as Type] to 'CSV UTF-8 (Comma delimited)' When the configuration is loaded from the Micro SD card, the file can be selected based on its filename (see 8.20 File Select Screen).

7.2 Configuration Procedure

7.2.1 Accessing SD Card

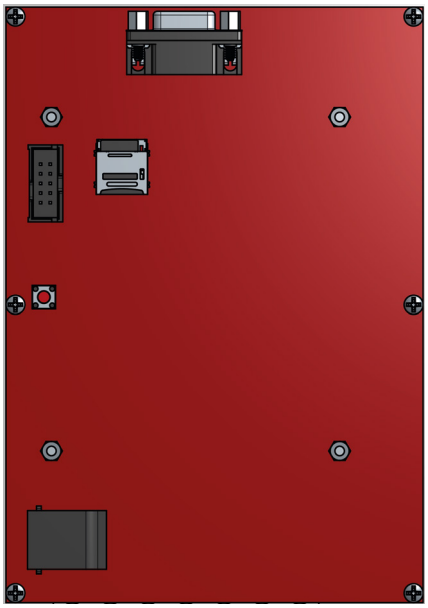


Figure 12: Crisis EVC Network Master Station Display PCB

There are two ways to access the data on the Micro SD card. They are:
1. Connect a micro-USB cable from the port on the back of the display to a PC.
2. Remove the Micro SD card from the holder and connect to PC.

If connecting to the Micro SD via a Micro USB cable, connect the cable to the port on the display board and then connect to a PC. The panel display will show the configuration mode popup, the mode LED will be illuminated yellow, and the panel will be temporarily disabled to avoid any possible corruption to the data on the SD card.

⚠	**If the user is on either the load or backup screen, the panel will not connect to USB. This is to avoid connection whilst the SD card is being read from / written to.**

If the Micro SD card is being removed, pull the holder DOWN and OUT to open. The Micro SD card can then be inserted into the supplied card reader and connected to a PC.

7.2.2 Updating Configuration File

Once access to the SD card is achieved, the file can be opened and updated as described in sections 7.4 to 7.6. When the configuration is updated, the spreadsheet **MUST BE SAVED** as a UTF-8 CSV (comma delimited) file. The file can be uniquely named with a 15-character filename of choice, this allows multiple versions of configuration, we suggest a copy is kept elsewhere as a backup.

Once the file updated file is saved, make sure the SD card is ejected from the PC properly to reduce the risk of the SD card getting corrupted.

If using the Micro-USB cable, this can now be disconnected from the PC and display. The popup will hide, and the panel will return to normal operation. If the Micro SD card was removed from the panel, it must be inserted back into the holder then pushed IN and UP to reconnect it to the display.

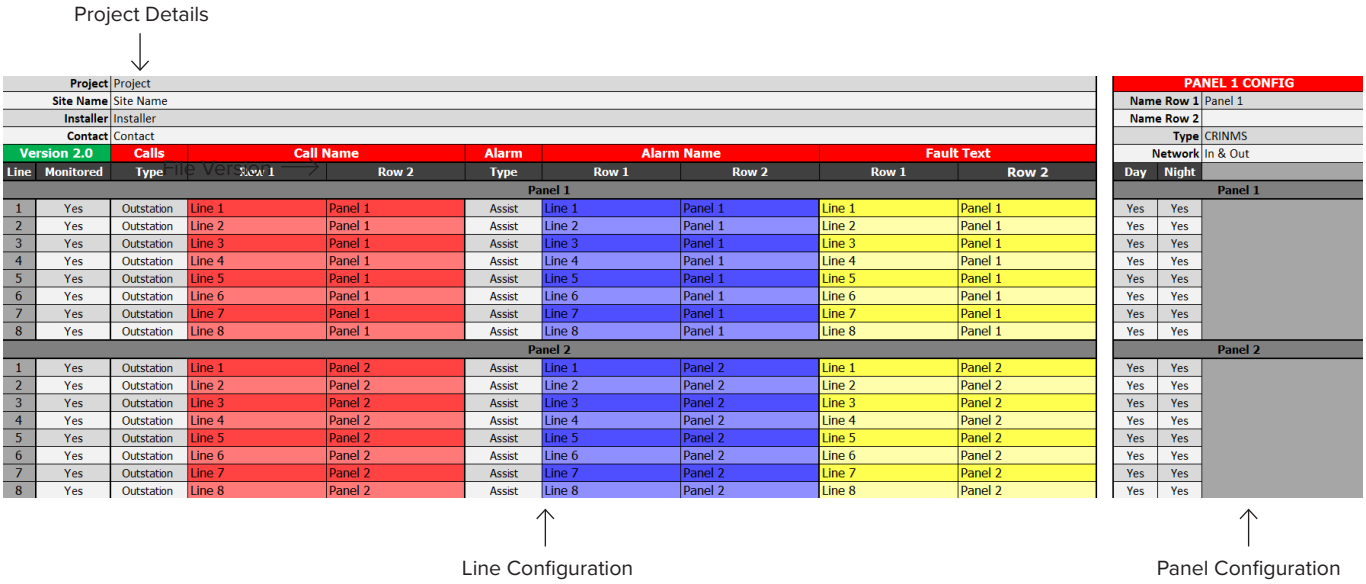
7.2.3 Loading Configuration File

To load the new configuration into the Crisis EVC Network Master Station, the user must first be logged in at level 3 (see 8.11 Login Screen) and then access the load screen (see 8.18 Load Screen). The file can be selected (see 8.20 File Select Screen) and the loaded into the panel and sent around the network (see 8.18 Load Screen).

> ⚠ The configuration stored on the Micro SD cards on other Crisis EVC Network Master Stations are not updated with the new configuration. Either only use one Crisis EVC Network Master Station for configuration (Preferred option) or store the updated configuration on all Micro SD cards to ensure discrepancies do not occur in future.

7.3 Configuration File Sections

The configuration file is split into 3 discrete sections: Project Details, Panel Details, Line Details, and File Version, see below.



Project	Project
Site Name	Site Name
Installer	Installer
Contact	Contact

Version 2.0		Calls	Call Name		Alarm	Alarm Name		Fault Text	
Line	Monitored	Type	Row 1	Row 2	Type	Row 1	Row 2	Row 1	Row 2
Panel 1									
1	Yes	Outstation	Line 1	Panel 1	Assist	Line 1	Panel 1	Line 1	Panel 1
2	Yes	Outstation	Line 2	Panel 1	Assist	Line 2	Panel 1	Line 2	Panel 1
3	Yes	Outstation	Line 3	Panel 1	Assist	Line 3	Panel 1	Line 3	Panel 1
4	Yes	Outstation	Line 4	Panel 1	Assist	Line 4	Panel 1	Line 4	Panel 1
5	Yes	Outstation	Line 5	Panel 1	Assist	Line 5	Panel 1	Line 5	Panel 1
6	Yes	Outstation	Line 6	Panel 1	Assist	Line 6	Panel 1	Line 6	Panel 1
7	Yes	Outstation	Line 7	Panel 1	Assist	Line 7	Panel 1	Line 7	Panel 1
8	Yes	Outstation	Line 8	Panel 1	Assist	Line 8	Panel 1	Line 8	Panel 1
Panel 2									
1	Yes	Outstation	Line 1	Panel 2	Assist	Line 1	Panel 2	Line 1	Panel 2
2	Yes	Outstation	Line 2	Panel 2	Assist	Line 2	Panel 2	Line 2	Panel 2
3	Yes	Outstation	Line 3	Panel 2	Assist	Line 3	Panel 2	Line 3	Panel 2
4	Yes	Outstation	Line 4	Panel 2	Assist	Line 4	Panel 2	Line 4	Panel 2
5	Yes	Outstation	Line 5	Panel 2	Assist	Line 5	Panel 2	Line 5	Panel 2
6	Yes	Outstation	Line 6	Panel 2	Assist	Line 6	Panel 2	Line 6	Panel 2
7	Yes	Outstation	Line 7	Panel 2	Assist	Line 7	Panel 2	Line 7	Panel 2
8	Yes	Outstation	Line 8	Panel 2	Assist	Line 8	Panel 2	Line 8	Panel 2

PANEL 1 CONFIG		
Name Row 1		Panel 1
Name Row 2		
Type		CRINMS
Network		In & Out
Day	Night	
Panel 1		
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Panel 2		
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	

Figure 13: Configuration File Sections

7.4 Project Details

This section contains the project details that are common to all panels for this project. These details are shown in the Info box available on the home screen. Additionally the site name is shown above the logo on the home screen.

7.4.1 Project

This line is used to store the project name. The project name is limited to 30 characters. The project name is only available on the Info screen.

7.4.2 Site Name

This line is used to store the site name. The site name is limited to 30 characters. The site name is shown on both the home screen and the Info box.

7.4.3 Installer

This line is used to store the name of the installer. The installer name is limited to 30 characters. The installer's name is shown in the Info box.

7.4.4 Contact

This line is used to store the contact details. The contact details are limited to 30 characters. The contact details are shown in the Info box.

7.4.5 Version Details

This section shows the version number of this configuration file. This box cannot be altered.

7.5 Line Configuration

This section contains the details that govern each line on the system. Each panel can have up to 8 lines. Each line can be configured to be used or not, and if it is used, then the text that is shown can be configured.

Version 2.0		Calls	Call Name		Alarm	Alarm Name		Fault Text	
Line	Monitored	Type	Row 1	Row 2	Type	Row 1	Row 2	Row 1	Row 2
Panel 1									
1	Yes	Outstation	Line 1	Panel 1	Assist	Line 1	Panel 1	Line 1	Panel 1
2	Yes	Outstation	Line 2	Panel 1	Assist	Line 2	Panel 1	Line 2	Panel 1
3	Yes	Outstation	Line 3	Panel 1	Assist	Line 3	Panel 1	Line 3	Panel 1
4	Yes	Outstation	Line 4	Panel 1	Assist	Line 4	Panel 1	Line 4	Panel 1
5	Yes	Outstation	Line 5	Panel 1	Assist	Line 5	Panel 1	Line 5	Panel 1
6	Yes	Outstation	Line 6	Panel 1	Assist	Line 6	Panel 1	Line 6	Panel 1
7	Yes	Outstation	Line 7	Panel 1	Assist	Line 7	Panel 1	Line 7	Panel 1
8	Yes	Outstation	Line 8	Panel 1	Assist	Line 8	Panel 1	Line 8	Panel 1

Figure 14: Line Configuration

7.5.1 Line Index

This is the index number of the line for this panel. The panel index is given by the panel bar. This index number cannot be altered.

7.5.2 Line Monitoring

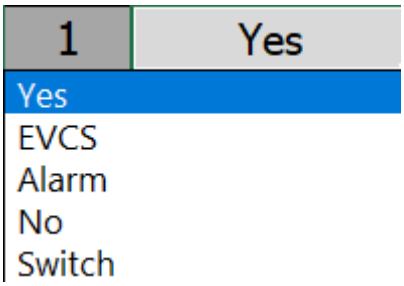


Figure 15: Line Monitoring

This determines if this line is used or not. If it is used, the type of device on this line is specified. There are five options available via a dropdown list:

Option	Description
Yes	Line monitored for both EVCS outstations and emergency assistance alarms.
EVCS	Line monitored for only EVCS outstations.
Alarm	Line monitored for only emergency assistance alarms.
No	Line not monitored for any devices.
Switch	Line monitored for event mode switch.

Table 3: Line Monitoring Options

7.5.3 Call Outstation Icon Selection

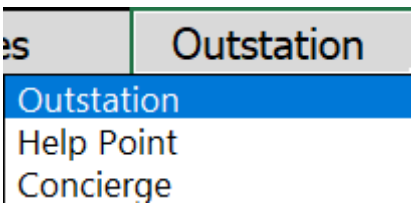


Figure 16: Call Outstation Icon Selection

This determines which icon is shown for a Type B outstation on the given line. It is set using the dropdown menu and has three options. Type A outstations are unaffected by this selection and will always show as fire telephones.

7.5.4 Call Location Text

Call Name	
Row 1	Row 2
Line 1	Panel 1
Line 2	Panel 1
Line 3	Panel 1
Line 4	Panel 1
Line 5	Panel 1
Line 6	Panel 1
Line 7	Panel 1
Line 8	Panel 1

Figure 17: Call Location Text

The outstation text is used to identify an outstation that is calling, in a conversation, or on hold. The Call screen displays all active outstations, using the outstation text to identify the outstations.

The Outstation text is split into 2 rows, with each row having a maximum of 20 characters. Row 1 is the top row, and Row 2 is the bottom row.

7.5.5 Alarm Icon Selection

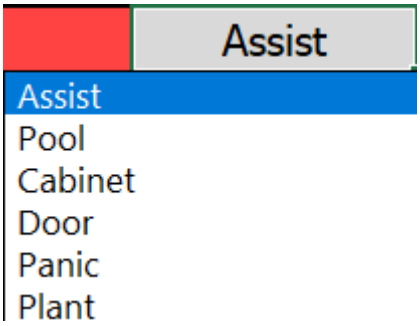


Figure 18: Alarm Icon Selection

The alarm icons can be defined for different functions, the default is a pull cord symbol for Assist Call Emergency Assistance Alarm. Other icons can be chosen using the dropdown menu which has six options e.g. Pool Alarm will identify using a Pool Alarm Icon on the given line.

7.5.6 Alarm Text

Alarm Name	
Row 1	Row 2
nel 1	
Line 1	Panel 1
Line 2	Panel 1
Line 3	Panel 1
Line 4	Panel 1
Line 5	Panel 1
Line 6	Panel 1
Line 7	Panel 1
Line 8	Panel 1

Figure 19: Alarm Text

The Alarm text is used to identify an active, or acknowledged, emergency assistance alarm. The Alarms screen displays all active emergency assistance alarms, using the alarm text to identify the alarms. The Alarm text is split into 2 rows, with each row having a maximum of 20 characters. Row 1 is the top row, and Row 2 is the bottom row.

7.5.7 Fault Text

Fault Text	
Row 1	Row 2
Line 1	Panel 1
Line 2	Panel 1
Line 3	Panel 1
Line 4	Panel 1
Line 5	Panel 1
Line 6	Panel 1
Line 7	Panel 1
Line 8	Panel 1

Figure 20: Fault Text

The Fault text is used to identify any fault associated with that line. This text allows additional information i.e., where equipment is fed from or located in addition to line identity. The Faults screen displays all faults, including line faults, where the line faults use the fault text to identify the line in fault. The Fault text is split into 2 rows, with each row having a maximum of 20 characters. Row 1 is the top row, and Row 2 is the bottom row.

7.6 Panel Configuration

PANEL 1 CONFIG		
Name Row 1		Panel 1
Name Row 2		
Type		CRINMS
Network		In & Out
Day	Night	
Panel 1		
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	
Yes	Yes	

Figure 21: Panel Configuration

This section contains the details that govern each panel on the system. There can be a total of up to 64 panels.

The panel details contain:

- Panel Name
- Panel Type
- Network Monitoring
- Day Setting for Line
- Night Setting for Line
- Fault Setting for Line

7.6.1 Panel Name

The panel name is the text that appears on the Home screen, and is used to identify the panel when a panel fault has occurred. The panel name is split into 2 rows, with each row having a maximum 20 characters. Row 1 is the top row, and Row 2 is the bottom row.

7.6.2 Panel Type

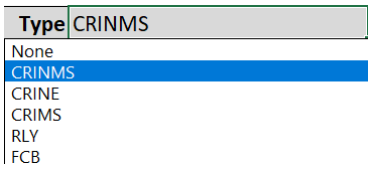


Figure 22: Panel Type

The network can consist of different types of panels. To set which type of panel is at a given network address, select one of the following six options from the dropdown box. The options are:

Option	Description
None	No panel at this address
TMS	Crisis EVC Network Master Station
EX8	Crisis EVC Network Expander
LX228N	Crisis EVC Master Station
LXRLY	LXRLY Relay Box at this address (not yet available)
LXFCB	LXFCB Fibre Converter at this address

Table 4: Panel Types

7.6.3 Network Settings

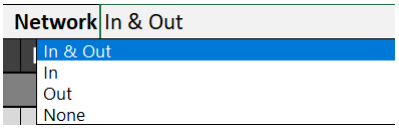


Figure 23: Network Settings

The network monitoring sets whether the network in and out ports on the given panel are monitored or not. The four network options that are available in the dropdown box are:

Option	Description
In & Out	Both net in and net out ports monitored
In	Only net in port monitored
Out	Only net out port monitored
None	Neither network port monitored

Table 5: Network Settings

7.6.4 Day/Night Filter Setting

Day	Night
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes

Figure 24: Day/Night Filter Setting

The panel day and night settings are used for filtering which lines will be displayed on the given panel when activated during either the daytime or night-time (see 8.16.1 Day and Night Modes). These settings can also be used to if a specific Crisis EVC Network Master Station is required to only show specific items, e.g. only calls from building A, but none from buildings B or C, or a Crisis EVC Network Master Station that only shows emergency assistance alarms e.g. a Crisis EVC Network Assist Call Master Station. By default all lines are set to always show on all panels.

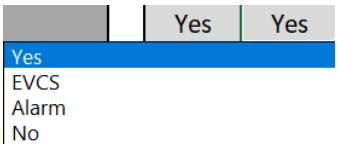


Figure 25: Day/Night Filter Setting

The four options that are available on the dropdown menu are:

Option	Description
Yes	EVCS calls and assistance alarm will both be shown on touchscreen display.
EVCS	Only outstation is shown on touchscreen display when activated.
Alarm	Only assistance alarms will be shown on touchscreen display when activated.
No	EVCS calls and assistance alarm will both not be shown on touchscreen display.

Table 6: Day/Night Filter Setting

7.7 Custom Logo

A custom logo can be shown on the home screen instead of the default logo. To use a custom logo, a bitmap file must be saved to the root directory of the Micro SD Card with the following properties:

Name: logo must be saved as Logo.bmp
Format: 16bit bitmap (BMP) or 24bit bitmap (BMP)
Size: 200x200 pixels

8 Operation

All operations are under the command of the Crisis EVC Network Master Station using the touchscreen display.

8.1 Navigation Button Operation

The navigation buttons located under the touchscreen display can be used in most circumstances to duplicate using the touchscreen display.

Left Button	Scroll up through the list on screen when appropriate.
Middle Button	Select the central highlighted item on screen when appropriate.
Right Button	Scroll down through the list on screen when appropriate.

Table 7: Navigation Button Operation

8.2 Header Bar

Figure 26: Header Bar

The header bar is present at the top of all screens. This bar allows the user to switch to the desired screen. It also displays the number of active events. This number of calls, alarms, and faults is available on all screens. The header icons for the faults, alarm, and calls will also flash to indicate new events have occurred.

		Pressing the Home button will show the Home screen.
		Pressing the Faults button will show the Faults screen. The numbers of faults are displayed within this button.
		Pressing the Alarms button will show the Alarms screen. The numbers of alarms are displayed within this button.
		Pressing the Calls button will show the Calls screen. The numbers of calls are displayed within this button.

Table 8: Header Bar

8.3 Footer Bar

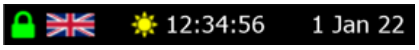


Figure 27: Footer Bar

The footer bar shows the time of day, the current access level, the language of the panel, the time, and the date.

	Panel in day time mode.		Access Level 1
	Panel in night time mode.		Access Level 2
	Panel Disabled		Access Level 3

Table 9: Time of Day Icons

8.4 Screen Button Operation

Buttons that have a single word of text, such as those on the menu screens (Figure 43 and Figure 44) and the back and save buttons, can be triggered either by pressing the icon or the text that is next to it. This only applies to those icons that are square with one rounded corner.

8.5 Home Screen

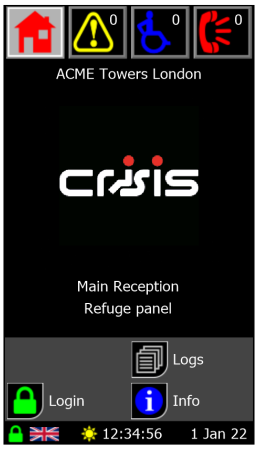


Figure 28: Home Screen

The Home screen is the default screen that is shown when there are no active calls or alarms, and when no user is logged in. It displays the site name, the logo, and the panel's name.

The buttons at the bottom of the screen allow the user to do the following:

	Log In - Allows for a user, with greater access and control, to be logged.
	Logs - If an SD card is installed, allows the user to view the full system log.
	Info - Allows the user to view the system information screen.

Table 10: Access Level 1 Buttons

8.6 Fault Screen

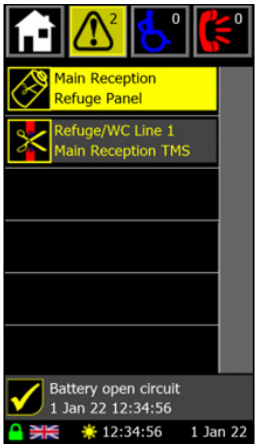


Figure 29: Fault Screen

The fault screen shows all the faults that are currently present on every panel on the network and is accessed by pressing the icon in the header. Each fault is shown with an icon denoting the fault (see 14.3 Panel Fault Icons and 14.4 EVCS Fault Icons) and two lines of customisable fault text. Six faults can be shown on the screen at any time, with more recent faults appearing higher on the screen. At the bottom of the screen is the fault accept button , along with the fault type and occurrence time for the currently highlighted fault. If there are more than six faults, the faults can be scrolled by touching the screen where the fault text is and moving the finger up or down as appropriate. The left and right navigation buttons located beneath the screen can also be used to change which fault is highlighted and scroll through the fault list. The fault list can also be scrolled through using the scroll icons that appear on the right hand side of the screen. Pressing the icons will have the following effect:

	Scrolls to show the six most recent faults.
	Scrolls up the fault list six entries.
	Scrolls down the fault list six entries.
	Scrolls to show the six oldest faults.

Table 11: Scroll Buttons

8.6.1 Accepting Faults

If there are unaccepted faults on the system, the fault accept button is shown. Additionally, the fault buzzer will be sounding, and the general fault LED will be flashing. To accept the faults either press the fault accept button or press the middle navigation button whilst on the fault screen. Once the faults are accepted, the button will disappear, the buzzer will cease sounding, and the general fault LED will show a solid colour. If a new fault occurs, or 8 hours passes since a fault has been accepted but not cleared, the panel will revert to the unaccepted state. The buzzer will resound, the general fault LED will begin to flash, and the fault accept button will be reshown.

8.6.2 Fault Information Screen

Pressing on one of the fault icons on the fault screen will show additional information about the fault. The information that is provided is:

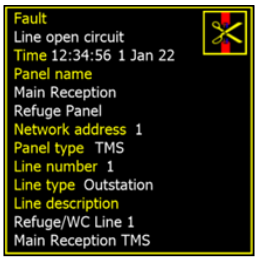


Figure 30: Fault Information Screen

Fault	Type of fault that has occurred.
Time	Time and date when the fault occurred.
Panel Name	Name of panel where the fault occurred.
Network Address	Address of the panel where the fault occurred.
Panel Type	Type of panel located where the fault has occurred – Crisis EVC Network Master Station, Crisis EVC Network Expander, Crisis EVC Master Station, RLY, FCB, or None.
Line Number	Index of line in fault. Only shown for line and master handset faults.
Line Type	Type of line in fault. Only shown for line and master handset faults.
Line Description	Fault description of line in fault. Only shown for line faults.

Table 12: Fault Information

Pressing the back button  at the bottom of the screen will return the user to the fault screen.

8.7 Alarm Screen

Figure 31: Alarm Screen

The alarm screen shows the status of any active emergency assistance alarms on the system and is accessed by pressing the  icon in the header bar. When an alarm is triggered, this screen is automatically displayed if the panel is not in use.

Each alarm is shown with an icon denoting the state of the alarm (see 14.2 Assistance Alarm Status Icons), and two lines of user definable text to describe the location. The highlighted alarm also shows status and time information at the bottom of the screen.

Six alarms can be shown on the screen at any time, with the oldest alarms appearing higher on the screen. If there are more than six alarms, the alarms can be scrolled by touching the screen where the alarm text is and moving the finger up or down as appropriate. The left and right navigation buttons located beneath the screen can also be used to change which alarm is highlighted and scroll through the alarm list. The alarm list can also be scrolled through using the scroll icons that appear on the right hand side of the screen. Pressing the icons will have the following effect:

	Scrolls to show the six most recent faults.
	Scrolls up the fault list six entries.
	Scrolls down the fault list six entries.
	Scrolls to show the six oldest faults.

Table 13: Scroll Buttons

8.7.1 Acknowledging Assistance Alarms

An emergency assistance alarm can be acknowledged either using the touchscreen or the navigation buttons. To achieve this:

1. Scroll through alarms until the desired alarm is on screen (and is highlighted in blue for the case of the navigation buttons).
2. Press the alarm icon  on the screen to acknowledge that alarm, or press the middle navigation to acknowledge the highlighted alarm.

The alarm will then show the acknowledged icon  to indicate that this alarm has been acknowledged.

8.8 Call Screen

Figure 32: Call Screen

The call screen shows the status of any active calls and conversations on the system and is accessed by pressing the  icon in the header bar. When a call comes in, this screen is automatically displayed if the panel is not in use. If the panel is in use, picking up the master handset whilst there is an active call will show this screen. Calls are either from fire telephones (Type A outstations) or disabled refuge points (Type B outstations). Type A outstation can be combined with a Type B to form a Type C outstation, the indication of the call will depend on whether it was the Type A or the Type B that is in use.

Each call is shown with an icon denoting the state of the call (see 14.1 EVC Call Status Icons), and two lines of user definable text to describe the location.

Six calls can be shown on the screen at any time, with the oldest calls appearing higher on the screen. If there are more than six calls, the calls can be scrolled by touching the screen where the call text is and moving the finger up or down as appropriate. The left and right navigation buttons located beneath the screen can also be used to change which call is highlighted and scroll through the call list.

The call list can also be scrolled through using the scroll icons that appear on the right hand side of the screen. Pressing the icons will have the following effect:

	Scrolls to show the six most recent faults.
	Scrolls up the fault list six entries.
	Scrolls down the fault list six entries.
	Scrolls to show the six oldest faults.

Table 14: Scroll Buttons

8.8.1 Answering an Outstation Call

An incoming Outstation call can be answered using either the touchscreen or the navigation buttons. To achieve this:

1. Lift the master handset off its cradle.
2. Scroll through calls until the desired call is on screen (and is highlighted in red for the case of the navigation buttons).
3. Press the call icon (for a Type A outstation, or for a Type B outstation) on the screen to answer that call, or press the middle navigation to answer the highlighted call.

The icon will change to for a Type A outstation, or for a Type B outstation. This indicates that a conversation is now possible with the selected outstation.

8.8.2 Placing an Outstation Call on Hold

If an active conversation needs to be placed on hold, this can be done either through the touchscreen or by use of the navigation button. To place a call on hold:

1. Scroll through calls until the desired call is on screen (and is highlighted in red for the case of the navigation buttons).
2. Press the call icon (for a Type A outstation, or for a Type B outstation) on the screen to answer that call, or press the middle navigation to answer the highlighted call.

The icon will change to for a Type A outstation, or for a Type B outstation. This indicates that a conversation is now on hold with the selected outstation.

8.8.3 Call Screen Popups

There are two popup messages that can appear on the call screen. The first is a reminder to lift the master handset off its cradle before answering a call. Picking up the master handset will hide the popup.

Figure 33: Pickup Handset Popup

The second popup is a message that shows another master handset is in control of the network, with the panel name for that master handset on show. Placing the master handset back on its cradle will hide the popup.

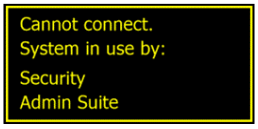


Figure 34: Cannot Connect Popup

Both popups can also be cleared by pressing anywhere on the screen.

8.8.4 Disconnect All Calls

Placing the master handset back onto its cradle will disconnect all calls. All conversations will end, and the affected outstations will revert to incoming call. Any outstations on hold will be taken off hold and will revert to incoming call.

To stop the incoming call, the outstation must be cancelled at source, i.e., the person at the outstation must cancel the call, either by placing the Type A outstation back onto its cradle, or by pressing the call/cancel button on the Type B outstation.

8.8.5 Call Screen Buttons

The buttons associated with the call screen are:

	Shows directory screen which allows user to choose from the list of allowed extensions.
	Shows the dial screen which allows the user to dial out to a specific outstation using its panel and line indexes.

Table 15: Call Screen Buttons

8.9 Directory Screen

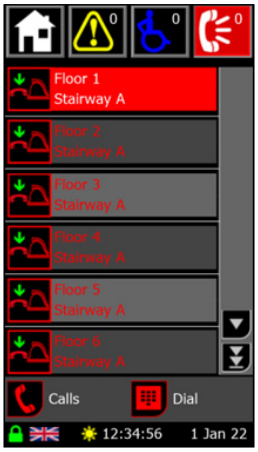


Figure 35: Directory Screen

The directory screen shows the list of all outstations available to this Crisis EVC Network Master Station and is accessed by pressing the  icon on the call or dial screen. Picking up the master handset when there are no active calls (and you aren't on either the call or dial screen) will also show this screen.

Each outstation is shown with an icon denoting the state of the outstation (see 14.1 EVC Call Status Icons), and two lines of user definable text to describe the location. The outstations are shown in alphabetical order using these names.

Master handsets for remote panels are also shown on the screen, displaying the name of the panel next to the icon. In regards to operating, the remote master handset is considered the same as any other outstation.

Six entries can be shown on the screen at any time. If there are more than six entries, the list can be scrolled by touching the screen where the text is and moving the finger up or down as appropriate. The left and right navigation buttons located beneath the screen can also be used to change which entry is highlighted and scroll through the directory list.

The directory list can also be scrolled through using the scroll icons that appear on the right hand side of the screen. Pressing the icons will have the following effect:

	Scrolls to show the six most recent faults.
	Scrolls up the fault list six entries.
	Scrolls down the fault list six entries.
	Scrolls to show the six oldest faults.

Table 16: Scroll Buttons

8.9.1 Placing a Call to an Outstation

To place an outgoing call to an outstation from the directory screen you must:

1. Lift the master handset off the cradle. If not, the pickup handset popup (Figure 33) will show.
2. Scroll through directory until the desired call is on screen (and is highlighted in red for the case of the navigation buttons).
3. Press the icon on the screen to, or press the middle navigation to call the highlighted outstation.

The directory entries icon will then switch to  , indicating the master is calling the outstation. When the outstation answer, the conversation will commence immediately.

8.9.2 Directory Screen Buttons

The buttons associated with the directory screen are:

	Shows directory screen which allows user to choose from the list of allowed extensions.
	Shows the dial screen which allows the user to dial out to a specific outstation using its panel and line indexes.

Table 17: Call Screen Buttons

8.10 Dial Screen

Figure 36: Dial Screen

The dial screen is used to call out to an outstation using the extension number for that outstation. It is accessed by pressing the icon on the call or directory screen.

The extension number is a three-digit number formed of the panel address and the line number. Digits are entered using the keypad with the panel address being entered first, followed by the line index. A line index of 1-8 is entered for an outstation, with 9 being used for the master handset on a Crisis EVC Network Master Station or Crisis EVC Master Station. Once an extension has been entered, the line monitoring of that line will be shown along with the name associated with a call on that line.

The icon will appear next to the entry box if that outstation can be called. Pressing the icon will call the outstation. If the master handset is on its cradle or another master handset is in control of the network, the relevant popup will be shown (see 8.8.3 Call Screen Popups).

If the outstation cannot be called, a message will show instead of the dial button either saying the outstation is in fault or not present.

8.10.1 Dial Screen Buttons

The buttons associated with the dial screen are:

	Deletes the last digit that was entered.
	Clears all digits that have been entered.
	Shows the call screen which allows the user to see all active calls on the network.
	Shows directory screen which allows user to choose from the list of allowed extensions.

Table 18: Dial Screen Buttons

8.11 Login Screen

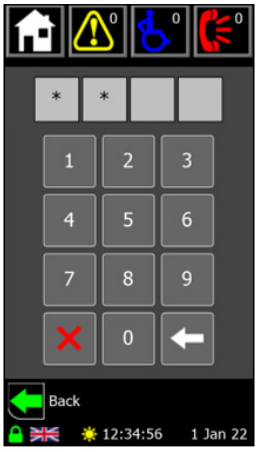


Figure 37: Login Screen

The login screen allows users with more access to login to the panel and is accessed by pressing the icon on the home screen
The four-digit PIN is entered using the keypad, with the other buttons having the following functions:

	Deletes the last digit that was entered.
	Clears all digits that have been entered.

Table 19: Delete & Clear Buttons

Once the fourth digit has been entered, if the PIN is valid the user will be logged in and returned to the appropriate menu screen. If the PIN is invalid a message will pop up over the entered digits saying Invalid PIN. Pressing any button on the keypad will clear this message and all the digits that are currently entered. By default the two access levels have the following PINs:

	Access Level 2	1664
	Access Level 3	1812

Table 20: Access Buttons

Pressing the icon will return the user to the home screen.

8.12 Info Screen

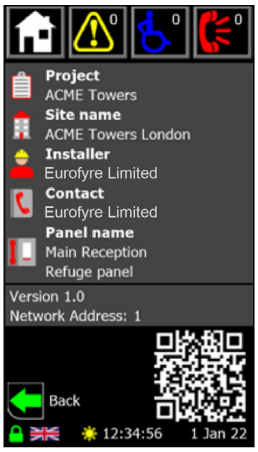


Figure 38: Info Screen

Project Name	Name given to the project.
Site Name	Name given to the site.
Installer	Name of the installer.
Contact	Contact details for the installer or maintenance.
Panel Name	Name given to the specific panel.
Version	Software version and build number.
Network Address	Address of the specific panel.

Table 21: System Info

The QR code links to the download page of the Eurofyre website where this manual can be downloaded from. Pressing the icon will return the user to the home or menu screen they came from.

8.13 Log Screen

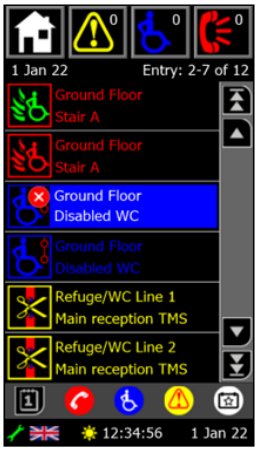


Figure 39: Log Screen

The log screen shows all the logged events for a given day and is accessed by pressing the icon on the home screen.

When an event occurs, that event is added to the log file. Each day has a different log file. Each log file can contain up to 65,535 events. All log files are stored on the attached Micro SD card. The log files are stored in CSV format, so they can be imported from the Micro SD card into a spreadsheet for analysis.

There are four different categories that log items fall into:

	Calls	EVCS and master handset events.
	Alarms	Emergency assistance alarm event.
	Faults	Fault occurrence and clear events.
	Events	Operating system events.

Table 22: Log Buttons

The different categories are colour coded for easy identification. Each entry shows an icon relating to the fault (see 14 Appendix C -Crisis EVC Network Master Station Status Icons), along with up to two lines of identifying text.

Along the top of the screen is the date of the log file that is being shown, along with the range of entries being shown out of the total number of entries.

8.13.1 Log Screen Navigation

If there are more than six log entries, then not all of them will be shown on the screen at once. The log entries can be navigated through using the following options:

- Scroll the screen by touching the text of any entry, then move finger up or down.
- Pressing one of the navigation buttons (see icons to the right) shown on screen.
- Pressing the left or right navigation buttons on the panel below the screen to scroll through individual events.

	Shows the six most recent log entries.
	Move the list up by six entries.
	Move the list down by six entries.
	Shows the six oldest log entries.

Table 23: Scroll Buttons

8.13.2 Log Screen Filters

The log filter icons can be pressed to show/hide log entries of a certain type. The filter toggles are denoted by:

Log Type	Selected Icon	Deselected Icon
Calls		
Alarms		
Faults		
Events		

Table 24: Log Screen Filters

8.13.3 Log Information Screen

Further information for a log event can be seen by pressing the icon for a given event, or by pressing the middle navigation button to see information for the highlighted event (e.g. the cancelled assistance alarm in Figure 39). This will bring up the log information screen, showing more details about the given log event.

Figure 40: Log Information Screen

Each information box is colour coded to identify which kind of log event has occurred. All events include the event icon, event name, and the time and date that the event occurred. Calls, alarms, and faults will show some further information about the event. That information is:

Project Name	Name of panel where the event occurred.
Network Address	Address of the panel where the event occurred.
Panel Type	Type of panel located where the fault has occurred - Crisis EVC Network Master Station, Crisis EVC Network Expander, Crisis EVC Master Station, RLY, FCB, or None.
Line Number	Index of line for event, if applicable.
Line Type	Monitoring state of line, if applicable.
Line Description	Descriptive text for the event at that line, if applicable.

Table 25: Log Information

Pressing the back button  at the bottom of the screen will return the user to the log screen.

Figure 41: Event Log Information Screen

8.14 Calendar Screen

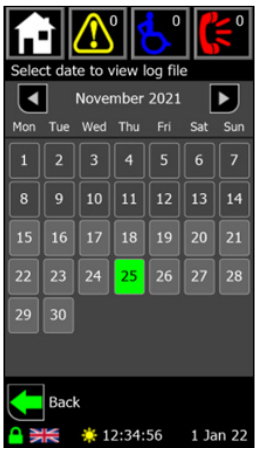


Figure 42: Calendar Screen

The calendar screen is accessed by pressing the  icon on the log screen. This allows the user to view a log file from a specific day. The calendar shows all days for the month displayed. The month can be changed by using the  and  buttons.

If there is a log for a specific day, that day will be shown in light grey. If the day is dark grey, then there will have been no log entries generated on that day, thus no file will have been created for that day. The log file that is currently open will be highlighted in green.

Pressing a day that has a log file will show the log for that day.

⚠	The selected log will always be the current day when the Log screen is first shown from the from the Home or Menu screen.

To return to the log screen without choosing a day, press the back button  .

8.15 Menu Screen

Once a user has logged in, the normal home screen (Figure 28) will be replaced with one of the menu screen, which allow the user to change the configuration on the panel.

When the level 2 passcode has been entered (1664 by default), the user will see the menu screen shown in Figure 43.

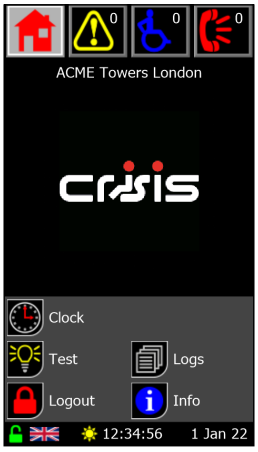


Figure 43: Level 2 Menu Screen

The buttons that are on shown on the level 2 menu are as follows:

	Clock	Allows the user to edit the time and date settings that are used across the network.
	Test	Allows the user to perform a lamp test on the panel.
	Logout	Logs the current user out and returns to the normal home screen (Figure 28).

Table 26: Level 2 Buttons

When the level 3 passcode has been entered (1812 by default), the user will see the menu screen shown in Figure 44.

Figure 44: Level 3 Menu Screen

The buttons that are shown on the level 3 menu screen, in addition to those on the level 2 screen, are as follows:

	Load	Allows the user to load the configuration from the Micro SD card.
	Backup	Allows the user to back up the configuration to the Micro SD card.
	Settings	Allows the user to access the settings menu to configure the system.

Table 28: Level 3 Buttons

8.16 Clock Screen

Figure 45: Clock Screen

The clock screen is show by pressing the icon on one on the menu screen and allows the user to set the time and date for the system.

Along with the time and date, the user can also set whether the system uses daylight saving time, as well as the day and night times for EVC display (see 8.16.1 Day and Night Modes). All the configuration is sent around the network to ensure all the panels have the same time and date settings.

To edit a value, first select it by pressing on the box, it will then be shown in white with a red border (as the time is in Figure 45). The keypad can then be used to enter the required digits in the position indicated by the underscore. Once a full value has been entered, an asterisk (*) will be shown after the value to indicate that it is currently not saved.

Also on the keypad are the following buttons:

	Deletes the last digit that was entered.
	Clears all digits that have been entered.

Table 29: Delete & Clear Buttons

To enable or disable the daylight-saving time, press the toggle. When the toggle is showing green the daylight-saving time is enabled.

The buttons at the bottom of the screen have the following functions:

	Shows once a change has occurred. Will save any of the unsaved values, which are indicated by an asterisk (*), and updates the network.
	Exits this screen and returns to the home screen without updating any values.

Table 30: Save & Exit Buttons

8.16.1 Day and Night Modes

All panels on the network have the same day and night-time. Updating the day/night-time will update the time on all panels. Each panel has its own configuration for which lines are shown during the day or night.

When the time reaches the day time, the panel enters day mode, indicated by icon in the footer. Only lines configured to operate during the day will be shown on the touchscreen display.

When the time reaches the night time, the panel enters night mode, indicated by icon in the footer. Only lines configured to operate during the night will be shown on the touchscreen display.

If both day time and night time are set to 00:00, the panel will be continually in day mode.

8.17 Panel Test Screen

By pressing the icon, the panel screen will scroll through each of the available colours, the statutory indicators will illuminate (with the mode LED matching the colour of the screen) and the buzzer will sound. The single colour status LEDs on the MAP panel will illuminate in sequence. To exit test mode, press the screen again or press one of the navigation buttons.

8.18 Load Screen

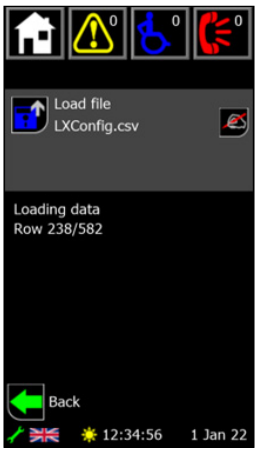


Figure 46: Load Screen

The load screen is show by pressing the icon on the menu screen and allows the user to load the system configuration from the Micro SD card on the back of the Crisis EVC Network Master Station display.

By default the Crisis EVC Network Master Station will try and load from a file called LXConfig.csv but other files can be loaded by pressing the icon to bring up the file select screen (See 8.20 File Select Screen).

Once the desired filename is on show, pressing the icon will begin the load procedure. **During the loading procedure, the user is unable to leave this screen.**

Whilst loading, the progress of the load will be shown in the area underneath the grey box. This will also show any errors if any occur (see 8.18.1 for information about errors).

Once the load is complete and the finished message has shown, the user can then leave the screen. Pressing will return the user to the menu screen.

8.18.1 Load Screen Errors

If an error occurs whilst loading a file from the SD card, one of the following message will be shown on screen:

Error Text	Description
Read Error	Data in given cell of the csv file (as denoted by row and column) is invalid.
Invalid File	File does not contain the expected number of rows or columns.
File Missing	File is not present on the SD card.

Table 31: Load Screen Errors

Upon receiving an error, the load process will end and the buttons on the screen will be active again. If the 'Read' or 'Invalid' message appears then the 'csv.' file must resaved.

8.19 Backup Screen

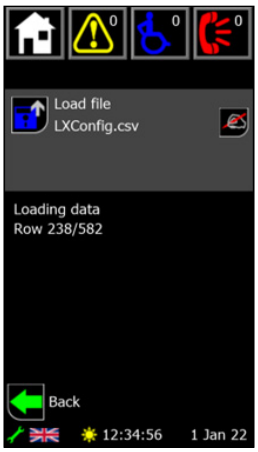


Figure 47: Load Screen

The backup screen is shown by pressing the icon on the menu screen and allows the user to backup the system configuration to the Micro SD card on the back of the Crisis EVC Network Master Station display.

By default the Crisis EVC Network Master Station will backup to a file called LXConfig.csv but other files can be selected by pressing the icon to bring up the file select screen (See 8.20 File Select Screen).

Once the desired filename is on show, pressing the icon will begin the backup procedure. **During the backing up procedure, the user is unable to leave this screen.**

Whilst backing up, the progress of the backup will be shown in the area underneath the grey box. This will also show any errors if any occur (see 8.19.1 for information about errors).

Once the backup has finished, the file will be verified to make sure it will load properly. If the file is valid, the finished message is shown, and the user can then leave the screen. Pressing will return the user to the menu screen.

8.19.1 Backup Screen Errors

If there is an error when writing the backup to the SD card, the display will try again, showing a “Backup Failed – Retrying” message. If after five attempts it remains unsuccessful, an error will appear saying 'Backup Failed' and the backup process will end. If a written file fails the verification, the backup will be tried again.

8.20 File Select Screen

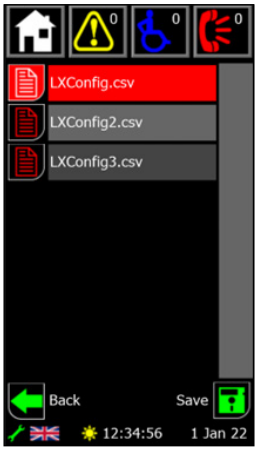


Figure 48: File Selection Screen

The file select screen is show by pressing the icon on either the load or backup screen and allows the user to select which file is being read from or written to.

The screen will show up to eight csv files at a time. If there are more than eight files, the list can be scrolled by touching the screen where the text is and moving the finger up or down as appropriate. The left and right navigation buttons located beneath the screen can also be used to change which file is highlighted and scroll through the file list. Pressing one of the icons will highlight that file (denoted by the icon and the red background).

The file list can also be scrolled through using the scroll icons that appear on the right hand side of the screen. Pressing the icons will have the following effect:

	Scrolls to top of the file list.
	Scrolls up the file list eight entries.
	Scrolls down the file list eight entries.
	Scrolls to bottom of the file list.

Table 32: Scroll Buttons

The buttons at the bottom of the screen have the following functions:

	Selects the highlighted file as the one for reading from or writing to and returns the user to the screen they came from.
	Returns the user to the screen they came from without selecting a new file.

Table 33: Save & Exit Buttons

8.20.1 Backing up to a New File

If a new file is needed for a backup, rather than just an overwrite of a current file, the user can press the “Save as” file that will appear at the end of the file list. Once selected, pressing the save icon will take the user to the keyboard screen (see 8.22 Keyboard Screen) and allow them to enter their own 15-character file name **(the .csv extension does not need to be entered)**. Pressing the save icon on that screen will return the user to the backup screen (see 8.19 Backup Screen) and **automatically** begins a backup of the Crisis EVC Network Master Station configuration.

8.21 Setting Screen

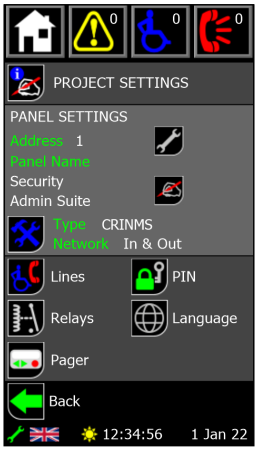


Figure 49: Settings Screen

The settings screen is show by pressing the icon on the menu screen and allows the user to configure the panel and network.

Pressing the icon will bring up the project settings screen and allow the user to edit the project name, site name, installer, and contact details (see 8.23 Project Settings Screen).

In the panel settings section there is the name, type and network monitoring state for a given panel. When the screen is first accessed, this information applies the local panel, but other panel's information can be shown by pressing the icon to access the panel select screen and selecting another panel. Pressing the icon will bring up the keyboard screen (see 8.22 Keyboard Screen) and allow the user to edit the panel location name. To edit the panel's type and network, press the icon to bring up the panel settings screen (see 8.25 Panel Settings Screen)

The buttons in the bottom section of the screen have the following functions:

	Lines	Allows the user to edit the line settings on the network.
	PIN	Allows the user to change the passcodes for both access levels on the Crisis EVC Network Master Station.
	Relays	Allows the user to configure the in-use relay on the local exchange board.
	Language	Allows the user to change the language of the Crisis EVC Network Master Station panel.
	Pager	Allows the user to configure the pager. Only shown if the daughterboard is attached.

Table 34: Setting Screen Buttons

8.22 Keyboard Screen

Figure 50: Keyboard Screen

The keyboard screen is used to edit the displayed text, with the text at the top of the screen informing the user as to which text is currently being edited (panel 1's name in the case of Figure 50).

There are either one or two boxes on display, depending on the text being edited. The currently selected box is shown in white with a green border. Pressing one of the boxes (if both boxes are on show) will select it for editing.

Pressing any character will append it to the end of the text in the selected box. Once the character limit has been reached, no other characters can be added.

The control buttons on the keyboard are as follows:

abc	Toggle between lowercase, shift (where next character is capitalised before returning to lowercase) and full uppercase.
Alt	Toggle between standard and extended characters.
	Deletes the last digit that was entered.
	Clears the whole line of text.

Table 35: Control Buttons

Pressing the save button  will save the new text to memory and transmit it across the network. The user will then be returned to the previous screen.

Pressing the back button  will return the user to the previous screen, discarding any changes.

8.23 Project Settings Screen

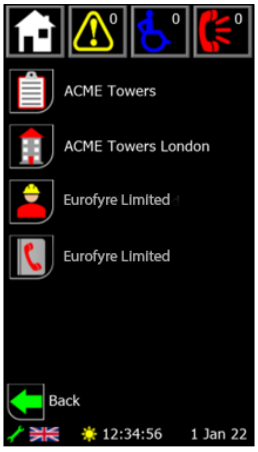


Figure 51: Project Settings Screen

The project settings screen is shown by pressing the  icon on the settings screen and allows the user to change the following:

	Project Name
	Site Name
	Installer Name
	Contact Details

Table 36: Control Buttons

Pressing one of the icons will bring up the keyboard screen (see 8.22 Keyboard Screen) to allow the user to update the given piece of text.

All these pieces of text are common to all panels across the network and have a maximum length of 30 characters.

Pressing the back button  will return the user to the settings screen.

8.24 Panel Select Screen

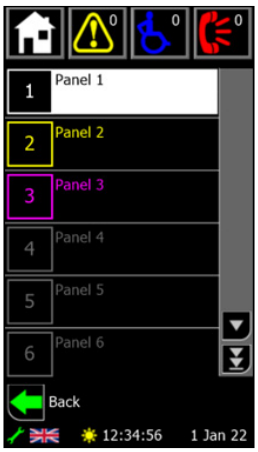


Figure 52: Panel Select Screen

The panel select screen is shown by pressing the  icon on the settings screen and allows the user to select any panel on the network. It also shows an overview of the status of all the panels on the network.

Each panel is shown with its panel address in the left-hand box, and two lines of user definable text to describe its location. The colour of each panel denotes its status depending on whether the panel is **present** (the panel has been seen by the network) and **configured** (the panel kind is set to something other than none). Those colours are:

Colour	Present	Configured
White	Yes	Yes
Yellow	No	Yes
Fuchsia	Yes	No
Grey	No	No

Table 37: Panel Selection Colour Indication

Six panels can be shown on the screen at any time. To see further panels, the list can be scrolled by touching the screen where the text is and moving the finger up or down as appropriate. The left and right navigation buttons located beneath the screen can also be used to change which panel is highlighted and scroll through the panel list.

The panel list can also be scrolled through using the scroll icons that appear on the right hand side of the screen. Pressing the icons will have the following effect:

	Scrolls to top of the file list.
	Scrolls up the panel list six panels.
	Scrolls down the panel list six panels.
	Scrolls to bottom of the panel list.

Table 38: Scroll Buttons

To select a panel, either press the number icon to select that panel, or press the middle navigation button to select the highlighted panel.

Pressing the back button  will return the user to the settings screen, without selecting a new panel.

8.25 Panel Settings Screen

Figure 53: Panel Settings Screen

The panel settings screen is shown by pressing the  icon on the settings screen and allows the user to set the configuration for panels on the network.

At the top of the screen is the address and name of the panel that is being configured. If this panel address requires to be changed then pressing the  and  icons will cycle through the panels, these buttons can be held down.

The panel type button selects the which type of panel is situated at the given panel address, with the one highlighted in green as the one that is selected.

Network monitoring sets the monitoring options for the network in and network out ports. Each port is controlled by a toggle with  indicating that the given port is monitored. To meet BS 5839-9:2021 the network should be wired as a ring, therefore both Net In and Net Out should be selected.

The buttons at the bottom of the screen have the following functions:

	Shows once a change has occurred. Will save any of the unsaved values, and updates the network. **Each panel's configuration must be saved separately.**
	Returns the user to the settings screen without updating any values.

Table 39: Save & Exit Buttons

8.25.1 Event Mode Settings

The event mode settings will only be shown for **Crisis EVC Network Master Station** panels and only if there is a **switch** defined on the network.

These settings allow the panel to be enabled or disabled depending on the state of a switch input (see 8.26.1 Line Monitoring Screen for information about a switch input) and is used in places like sports stadia that have a police control room.

The two toggle icons set what is shown on the display when the event switch is either turned on or off. Pressing the icon will cycle through the following options:

	EVCS calls and assistance alarm will both be shown on touchscreen display.
	Only EVCS calls will be shown on touchscreen display when activated.
	Only assistance alarms will be shown on touchscreen display when activated.
	EVCS calls and assistance alarm will both not be shown on touchscreen display.

Table 40: Event Mode Buttons

If a given panel isn't showing both calls and alarms at a given time, the  icon will be displayed in the footer to denote this. The panel being disabled and enabled is also logged.

	All panels and all lines must be always monitored from at least one display.

8.26 Line Settings Screen

Figure 54: Line Settings Screen

The line settings screen is shown by pressing the icon on the settings screen and allows the user to see the monitoring for each line, and change any of the text associated with the line.

The address and name of the panel are shown at the top of the screen and the corresponding lines. Alternative panels can be selected by pressing the and icons which will cycle through the panels, these buttons can be held down.

A line is selected using the number buttons, with 1 indicating which line is the currently selected one.

Underneath the line select is the monitoring state of the selected line. The states that are possible are:

No	No device is being monitored for.
EVCS	Type A, Type B or Type C outstation attached.
Alarm	Emergency assistance alarm attached.
Yes	Both outstation and assistance alarm attached.
Switch	Event mode switch input attached to line.

Table 41: Line Screen Configuration

Pressing the icon will bring up the line monitoring screen and allow the user to configure the monitoring of a given line, along with the call and alarm icons, and the day and night settings (see 8.26.1 Line Monitoring Screen). The call name, alarm name, and fault name for the given line are all shown and can be edited by pressing the icon next to the desired text. All these pieces of text are two lines of 20 characters.

Pressing the back button will return the user to the settings screen.

8.26.1 Line Monitoring Screen

Figure 55: Line Monitoring Screen

The line monitoring screen is shown by pressing the icon on the line settings screen and allows the user to configure what device is attached to a given line, as well as set the call and alarm icons, and the local day and night settings.

At the top of the screen are indicators for the panel and line indexes. The panel and line index is altered by pressing the and icons which will cycle through the indexes, these buttons can be held down. The line monitoring is set using the three toggles.

They define the device type for the selected line. Setting all toggles to the off position defines the line isn't being used for any device. Event mode requires a key switch on a line, this is defined by the switch toggle. The icon selects are used to define which icon shows on Crisis EVC Network Master Station displays for the given line.

	The call icon select only affects Type B outstation calls.

They are enabled when the relevant toggle is enabled .The selected icon is denoted by the green border and different icons are selected by pressing on the icon.

The buttons at the bottom of the screen have the following functions:

	Shows once a change has occurred. Will save any of the unsaved values and updates the network. **Each line's configuration must be saved separately.**
	Returns the user to the line settings screen without updating any values.

Table 42: Save & Exit Buttons

8.26.1.1 Line Display Option (Day/Night)

Each line can be configured to show or ignore any active outstation or emergency assistance alarm on the local Crisis EVC Network Master Station. This allows for each Crisis EVC Network Master Station on the network to be configured to show a different combination of calls and alarms. This is commonly used if a specific Crisis EVC Network Master Station is required only to show specific items, e.g., only calls from Building A, but none from Buildings B and C, or emergency assistance alarms only.

	All panels and all lines must be always monitored from at least one display.

The display options are configured using the two buttons which cycle through the following states when pressed:

	EVCS calls and assistance alarm will both be shown on touchscreen display.
	Only EVCS calls will be shown on touchscreen display when activated.
	Only assistance alarms will be shown on touchscreen display when activated.
	EVCS calls and assistance alarm will both not be shown on touchscreen display.

Table 43: Line Display Option Buttons

8.27 PIN Change Screen

Figure 56: PIN Change Screen

The PIN change screen is shown by pressing the icon on the settings screen and allows the user to change the level 2 and level 3 PINs for the local Crisis EVC Network Master Station panel, the pin must be 4 digits.

Select the desired access level using the icons on the left-hand side of the screen, with the selected one being highlighted in green. The icons correspond to the following access levels:

		Shows once a change has occurred. Will save any of the unsaved values and updates the network. **Each line's configuration must be saved separately.**
		Returns the user to the line settings screen without updating any values.

Table 44: PIN Change Buttons

The new PIN can then be entered using the keypad. Once the first box is completed, the repeat box will automatically select, and the PIN must be entered again. These boxes can be selected manually too, with the selected one showing in white with the red border.

The buttons at the bottom of the keypad have the following functions:

	Deletes the last digit that was entered.
	Clears all digits that have been entered in the selected box.

Table 45: Keypad Buttons

Once both boxes are full, the codes will be checked. If there is an error (either the two code entries don't match, or the code is being used for another user) the boxes will turn yellow and must be re-entered. If the codes are valid, a save button will appear at the bottom of the screen to store the new codes

Pressing the back button will return the user to the settings screen.

8.28 Relay Settings Screen

The programmable relay on the exchange board can be configured to either trigger immediately when a call or alarm is received, or after a set delay of up to 10 minutes. Both are configured from the menu that is accessed by pressing the icon on the settings screen.

8.28.1 In Use Relay Configuration

Figure 57: Relay Configuration Screen

Setting the relay operation to in use will display the screen shown in Figure 57. The relay will trigger immediately, based on which monitoring settings are selected.

The sliders determine which devices will trigger the relay to close. EVCS and Alarms can be enabled independently, or both together (i.e. allowing the relay to close on any outstation or assistance alarm activation). They monitor all devices that the panel is set to display at the time (see 8.16.1 for information about line display options).

The ring option defines the relay will trigger whenever the master handset on the Crisis EVC Network Master Station is ringing. Therefore the relay will close when an outstation is activated or if another panel is calling the local one. Once configuration has changed, the save button will display. Pressing it will store the new configuration to the panel.

Pressing the back button will return the user to the settings screen.

8.28.2 Not Answered Relay Configuration

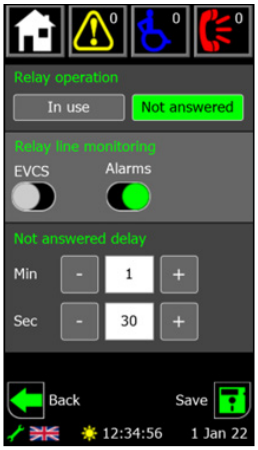


Figure 58: Not Answered Relay Configuration Screen

Setting the relay operation to not answered will display the screen shown in Figure 58. The relay will trigger after a set delay, based on which monitoring settings are selected.

The sliders determine which devices will trigger the relay to close. EVCS and Alarms can be enabled independently, or both together (i.e. allowing the relay to close on any outstation or assistance alarm activation). They monitor all devices that the panel is set to display at the time (see 8.16.1 for information about line display options).

The delay is set by pressing or holding down the + and – buttons to increase or decrease the number of minutes and seconds that the call or alarm is active for before the relay closes. The maximum delay is 9 minutes and 59 seconds.

Once configuration has changed, the save button will display. Pressing it will store the new configuration to the panel.

Pressing the back button will return the user to the settings screen.

8.29 Language Screen

Figure 59: Language Screen

The language screen is selected by pressing the icon on the settings screen and allows the user to change the language that the Crisis EVC Network Master Station uses.

A language can be selected by pressing the flag icon. This will then highlight the language name in red. Pressing the save button will then set the Crisis EVC Network Master Station to the selected language, updating all the text, and showing the new flag on the footer bar.

This language will now be used across the whole Crisis EVC Network Master Station, including loading from, and backing up to, the Micro SD card.

Pressing the back button will return the user to the settings screen.

8.30 Pager Screen

⚠	This screen is only accessible if the console daughter board is attached to the rear of the Crisis EVC Network Master Station.

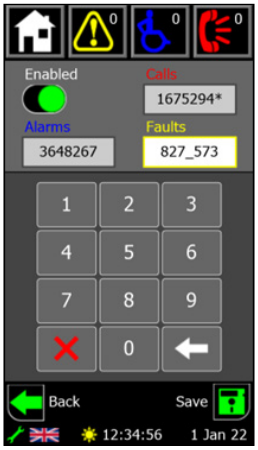


Figure 60: Pager Screen

The pager screen is shown by pressing the icon on the settings screen and allows the user to enable and set the capcodes for use with a Scope CX6 paging system.

The enable toggle sets whether the pager is enabled or not. This sets the RS232 port to send out the pager information rather than its standard console data.

There are three separate 7-digit capcodes for calls, alarms, faults. These correspond to the pager address or group address.
To edit a capcode, first select it by pressing the box containing the code. A selected code has a white box with a coloured border that matches the text above it.

The code can then be entered using the keypad, with the underscore indicating when in the code the next digit will be placed. Once a full code is entered an asterisk (*) will appear to indicate that the code is currently unsaved.

At the bottom of the keypad are buttons that have the following functions:

←	Deletes the last digit that was entered.
✕	Clears all digits that have been entered.

Table 46: Keypad Buttons

The buttons at the bottom of the screen have the following function:

🔒	Shows once a change has occurred. Will save any of the unsaved values, which are indicated by an asterisk (*), and updates the network.
←	Exits this screen and returns to the home screen without updating any value.

Table 47: Save & Exit Buttons

9 Indications & Controls

Figure 61: Crisis EVC Network Master Station Indication

9.1 Mode Indicator Summary

Mode	Description
Green Solid	Normal state
Red Solid	Outstation off hook
Blue Solid	'Assist Call' active
Yellow Solid	Refuge (Type B) points disabled
Flashing Red/Blue	Incoming call/assist all alarm at same time

Table 48: Mode Indicators

9.2 Power Supply & CPU Indicator Summary

✓ LED Illuminated
x LED Off
Flash LED Flashing

AC	DC	PSU	CPU	Description
✓				Mains OK
x		✓		Mains failure
✓	✓			Battery OK
✓	x	Flash		Battery open circuit
✓	x	✓		Battery short circuit
✓	Flash	✓		Battery high impedance
✓		✓	✓	PSU processor fail
✓			✓	Display or Exchange Processor Fault or Display-Exchange comms fault

Table 49: Power Supply & CPU Indicator Summary

10 Commissioning Procedure

The commissioning should be carried out by a competent person who has a basic knowledge and understanding of the design and installation sections of BS 5839 part 9:2021 and has access to the specification of the project.

10.1 Cable Checks

The 500v insulation tests should have been carried out by the installer and the results made available to the commissioning engineer.

All cables should be correctly labelled.

Test field wiring and check for end-of-line 10kΩ resistor. Check cables are clear from any short or open circuits.

Connect outstation cables into Line Cards ensuring the Earth is sleeved and terminated into the Earth block.

10.2 Network Set up

Configure relevant dipswitches for the network settings that may be required as per the set-up section in this manual.

Connect the network cabling (if appropriate), ensuring Net OUT ABCD is correctly connected to Net IN ABCD and the ring is continuous. Only connect the Earth screen of the Net IN cables.

10.3 Power Up

Power up the Crisis EVC Network Master Station using mains only, fed via a double pole isolator local to the panel fed from a dedicated circuit. The AC power indicator will be illuminated, and the DC power indicator is extinguished. The PSU fault and General fault indicators will be illuminated. There should be no line fault indicators illuminated.

If there are no line faults present, the battery may be connected. The DC power indicator will be illuminated, and the PSU fault and General fault indicators are extinguished when the battery is connected.

If there are any line fault indicators illuminated, then the field wiring should be checked prior to the battery being connected.
Repeat the power up section for any additional Crisis EVC Network Expander panels or additional Crisis EVC Network Master Station panels.

10.4 Site Configuration

Upload the site configuration from the Micro SD card (recommended) or using the settings menus.

If device missing or network faults are reported address these before continuing. Once remedied re-upload the site configuration to ensure all panels are programmed.

10.5 Site Testing

Lift the master handset receiver and listen for a cadence tone.

All outstations may be tested now, visit each outstation in turn and test that it is connected to the correct Master Station or Expander panel and perform an intelligibility test. This test should be conducted when the building has normal background noise levels. The intelligibility test requires two personnel.

Where Assist Call is fitted, all pull cords in each circuit should be tested, acknowledged at the panel, cancelled at the call location and the panel text checked. Ensure all controls and indicators operate correctly.

When all outstation tests are complete, network cable checks should be performed to ascertain correct operation by unplugging network cable to ensure the network is correctly fault monitoring and continues to work with a single cable fault.

When complete the log may be retrieved from Micro SD card, saved as a spreadsheet, and kept for record purposes.

11 Maintenance

It is a requirement of BS 5839-9:2021 that a maintenance agreement be in place for the EVCS. The maintenance schedule should be as follows:

Frequency	Test
Weekly	Test a different outstation on the system each week and make a call to the master station. Repeat each week until all outstations and master stations are tested. Record these results in the site log. *if more than one master station is present alternate weekly. Non EVC mode devices should also be tested for correct operation, at a frequency of at least 1 per week so that all devices are tested over a 12-month period.
Biannually	Engineer call to check system operation perform 100% outstation and master station operation, field strength of attached AFILS equipment and check battery health. Record results and any variations into the site Logbook.
5 Yearly	In addition to Yearly tests replace all batteries and record in Logbook.

Table 50: Maintenance Schedule

✓	Refer to BS 5839-9:2021 for full details of maintenance and testing requirements.

12 Appendix A - Operational Flowcharts

12.1 Home/Menu Structure

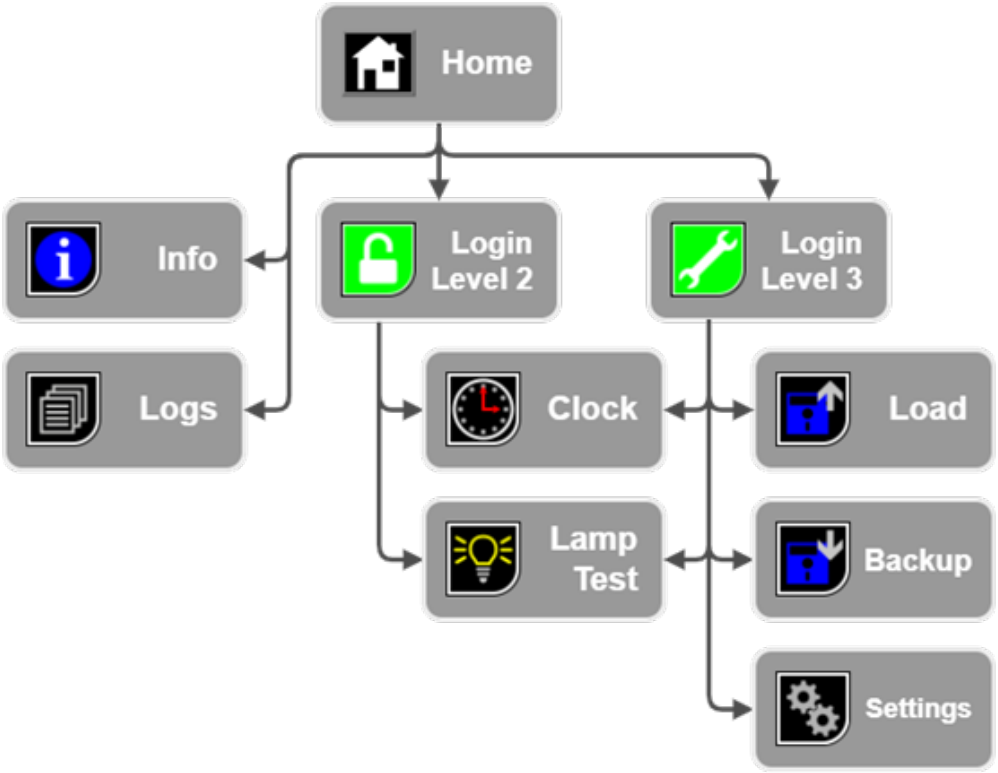


Figure 62: Home/Menu Structure

12.2 Settings Structure

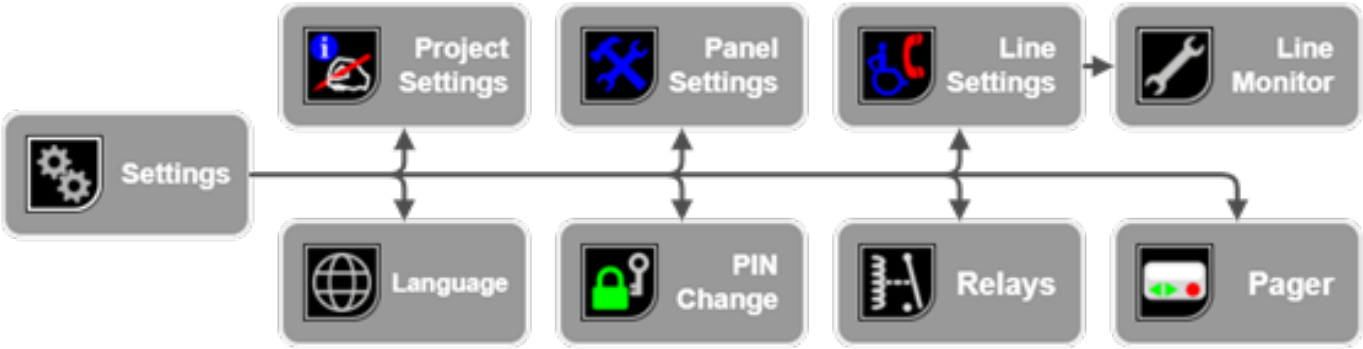


Figure 63: Settings Structure

13 Appendix B - Simple Operating Instructions

Figure 64: Call Screen

The call screen shows the status of any active calls and conversations on the system and is accessed by pressing the icon in the header bar. When a call comes in, this screen is automatically displayed if the panel is not in use. If the panel is in use, picking up the master handset whilst there is an active call will show this screen. Calls are either from fire telephones (Type A outstations) or disabled refuge points (Type B outstations). The outstation text will detail the location.

13.1 Answering an EVCS Call

An incoming EVCS call can be answered using either the touchscreen or the navigation buttons. To achieve this:

1. Lift the master handset off its cradle.
2. Scroll through calls until the desired call is on screen (and is highlighted in red for the case of the navigation buttons).
3. Press the call icon (for a Type A outstation, or for a Type B outstation) on the screen to answer that call, or press the middle navigation to answer the highlighted call.

The icon will change to for a Type A outstation, or for a Type B outstation. This indicates that a conversation is now possible with the selected outstation.

13.2 Placing an EVCS Call on Hold

To place a call on hold:

1. Scroll through calls until the desired call is on screen (and is highlighted in red for the case of the navigation buttons).
2. Press the call icon (for a Type A outstation, or for a Type B outstation) on the screen to answer that call, or press the middle navigation to answer the highlighted call.

The icon will change to for a Type A outstation, or for a Type B outstation. This indicates that a conversation is now on hold with the selected outstation.

13.3 Ending an EVCS Call

The call must be ended by pressing the cancel button on a type B outstation or replacing the handset on a Type A outstation.

13.4 Acknowledging an Alarm

Figure 65: Alarm Screen

The alarm screen shows the status of any active emergency assistance alarms on the system and is accessed by pressing the  icon in the header bar. When an alarm is triggered, this screen is automatically displayed if the panel is not in use.

Each alarm is shown with an icon denoting the state of the alarm (see 14.2 Assistance Alarm Status Icons), and two lines of user definable text to describe the location. The highlighted alarm also shows status and time information at the bottom of the screen.

An emergency assistance alarm can be acknowledged either using the touchscreen or the navigation buttons. To achieve this:

1. Scroll through alarms until the desired alarm is on screen (and is highlighted in blue for the case of the navigation buttons).
2. Press the alarm icon  on the screen to acknowledge that alarm, or press the middle navigation to acknowledge the highlighted alarm.

The alarm will then show the acknowledged icon  to indicate that this alarm has been acknowledged.

13.5 Placing a Call to an Outstation From Directory

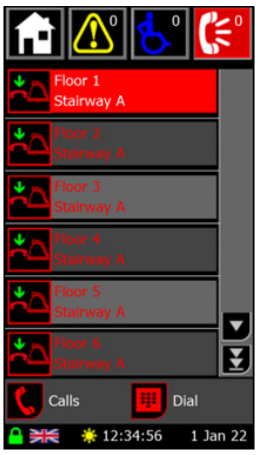


Figure 66: Directory Screen

The directory screen shows the list of all outstations available to this Crisis EVC Network Master Station and is accessed by pressing the  icon on the call or dial screen. Picking up the master handset when there are no active calls (and you aren't on either the call or dial screen) will also show this screen.

Each outstation is shown with an icon denoting the state of the outstation. The outstations are shown in alphabetical order using their location names.

Master handsets for remote panels are also shown on the screen, displaying the name of the panel next to the icon. Regarding operating, the remote master handset is considered the same as any other outstation.

To place an outgoing call to an outstation from the directory screen you must:
1. Lift the master handset off the cradle. If not, the pickup handset popup (Figure 33) will show.
2. Scroll through directory until the desired call is on screen (and is highlighted in red for the case of the navigation buttons).
3. Press the icon on the screen to, or press the middle navigation to call the highlighted outstation.

The directory entries icon will then switch to , indicating the master is calling the outstation. When the outstation answer, the conversation will commence immediately.

13.5.1 Directory Screen Buttons

The buttons associated with the directory screen are:

	Shows directory screen which allows user to choose from the list of allowed extensions.
	Shows the dial screen which allows the user to dial out to a specific outstation using its panel and line indexes.

Table 51: Directory Buttons

13.6 Placing a Call to an Outstation from Dial

Figure 67: Dial Screen

The dial screen is used to call out to an outstation using the extension number for that outstation. It is accessed by pressing the icon on the call or directory screen.

The extension number is a three-digit number formed of the panel address and the line number. Digits are entered using the keypad with the panel address being entered first, followed by the line index. A line index of 1-8 is entered for an outstation, with 9 being used for the master handset on a Crisis EVC Network Master Station or Crisis EVC Master Station. Once an extension has been entered, the line monitoring of that line will be shown along with the name associated with a call on that line.

The outstation is called by pressing the icon. If the outstation cannot be called, a message will show instead of the dial button either saying the outstation is in fault or not present.

13.6.1 Dial Screen Buttons

The buttons associated with the dial screen are:

	Deletes the last digit that was entered.
	Clears all digits that have been entered.
	Shows the call screen which allows the user to see all active calls on the network.
	Shows directory screen which allows user to choose from the list of allowed extensions.

Table 52: Dial Screen Buttons

14 Appendix C - Status Icons

14.1 EVC Call Status Icons

	Incoming Type A outstation call.		Conversation with help a point.
	Conversation with Type A outstation.		Help point on hold.
	Type A outstation on hold.		Help point connect to remote panel
	Type A outstation connect to remote panel		Incoming concierge call.
	Incoming Type B outstation call.		Conversation with a concierge.
	Conversation with Type B outstation.		Concierge on hold.
	Type B outstation on hold.		Concierge connect to remote panel
	Type B outstation connect to remote panel		Master handset off hook.
	Incoming help point call.		Master handset, outstation, help point or concierge on hook.

Table 53: EVC Call Status Icons

14.2 Assistance Alarm Status Icons

	Assist Call alarm activated.		Medicine cabinet alarm activated.
	Assist Call alarm acknowledged.		Medicine cabinet alarm acknowledged.
	Assist Call alarm cancelled.		Medicine cabinet alarm cancelled.
	Pool alarm activated.		Panic alarm activated.
	Pool alarm acknowledged.		Panic alarm acknowledged.
	Pool alarm cancelled.		Panic alarm cancelled.
	Door alarm activated.		Plant alarm activated.
	Door alarm acknowledged.		Plant alarm acknowledged.
	Door alarm cancelled.		Plant alarm cancelled.

Table 54: Assistance Alarm Status Icons

14.3 Panel Fault Icons

	Mains failure.		Display checksum fault.
	Battery open circuit.		Display data fault.
	Battery short circuit.		Network data fault.
	Battery impedance fault.		Panel missing fault.
	Baseboard CPU fault.		Audio open circuit fault
	Display CPU fault.		Audio short circuit fault
	PSU CPU fault.		

Table 55: Panel Fault Icons

14.4 EVC Fault Icons

	Line open circuit.		Line card missing associated with this line.
	Line short circuit.		Master handset open circuit.
	Line earth fault.		Master handset short circuit.

Table 56: EVC Fault Icons

14.5 Event Log Icons

	New log file created.		User logged in.
	System powered and initialised.		User logged out.
	Watchdog reset.		Panel lamps tested.
	Time and date changed.		Event switch turned off
	Configuration loaded from SD card.		Event switch turned on
	Configuration saved to SD card.		Panel disabled by event mode
	Config settings changed.		Panel enabled by event mode
	Faults accepted.		

Table 57: Event Log Icons

15 Technical Specification

Power Supply & Charger	
AC Input	230V AC ± 10% 50/60Hz
Internal Power Supply	5V, 16V, 27V DC
Supply and Battery	Monitored Open, Short, Fuses, High Impedance
Protection	Deep Discharge, Short, Thermals
Battery Type	1 × 12V 7AH VRSLA
Mains Fuse	240V 1A HRC
Battery Fuse	750mA PTC
Max Charge Current	400mA

Table 58: Power Supply & Charger Technical Specification

Inputs	
Lines	2-8 in 2 Line Blocks
Remote Enable	Short to Use
End of Line Monitoring	10kΩ

Table 59 Inputs Technical Specification

Outstation Cables	
Type	Standard* / Enhanced
Cores	1 × 2 Core Radial 1mm or 1.5mm
Distance	500m from Master Station

Table 60 Outstation Technical Specification

Outputs	
Number	2, Fault & In Use
Fault Relay	1 × Volt Free NC, Com 30V DC 1A
In Use Relay	1 × Volt Free NO, Com 30V DC 1A

Table 61: Outputs Technical Specification

Controls & Indication	
Navigation Buttons	3 Push Button Navigation Keys
Statutory Indicators	3 × PSU Status Indicators 1 × CPU Fault Indicator 1 × General Fault Indicator 1 × RGB Mode Indicator
Touchscreen	4.7” RGB Touchscreen

Table 62: Controls & Indication Specification

Network Cables	
Type	Standard* / Enhanced
Cores	2 × 2 Core Loops, 1mm or 1.5mm (2C Data, 2C Audio)
Distance	500m Max Between Panels

Table 63: Network Cables Specification

Standards Compliance	
EMC	EN 55035:2017+A11:2020 EN 55032:2015+A1:2020
LVD	EN IEC62368-1:2020+A11:2020
Product Family	BS 5839-9:2021, BS 9999:2017, BS 8300-2:2018

Table 64: Standards Compliance Specification

Dimensions	Panel	Bezel	Cut-Out
Height	300mm	350mm	305mm
Width	350mm	400mm	355mm
Depth	95mm	1mm	85mm
Weight	4.5kg		

Table 65: Dimensions Specification

*Refer to BS 5839-9:2021 for exceptions.

The Crisis EVC Network Master Station EVCS is designed and manufactured in the UK

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