

FireClass FC700 Series Panels Commissioning Instructions



Introduction

The following sections provide information on configuring and testing the system.

At this stage the complete system hardware (installing ancillary boards), mounting, wiring and configuration of the different components of the FireClass FC700 series range of panels should be complete.

A comprehensive test procedure cannot be provided as the testing must be in accordance with local regulations and practice. Sites also differ in terms of the system design, including the “cause and effect” logic built into the system configuration. Tests, therefore, must be individually planned to suit the specific site requirements.

Instead of a comprehensive test procedure, this document provides guidelines in the form of an example procedure.



DANGER

Incorrect commissioning of the fire protection system produces a danger of failure, possibly leading to death or serious injury, in the event of a fire.

You must fully test the system, according to the system configuration, and any local regulations in force.

Power up the panel

How to power up the panel

- 1 Connect the batteries to the FC-FI card. The control panel will not start at this point as the mains is not connected. Check if the fuse is inserted in each Fuse Kit in Line.
- 2 Connect the mains to power up the control panel. The LCD should now show an ‘Initialization in progress’ message, counting down to the completion time.
- 3 The internal buzzer might now sound to alert you to faults. To silence the buzzer press the Silence Buzzer key.



Graphical User Interface (GUI) Touch screen

The touch screen on the GUI is not the same as that found on tablets or mobile phones. As resistive technology is used, a stylus pen or finger nail is suitable for touching the screen. To eliminate fake or unwanted touching, the GUI requires a longer touch of the stylus pen.

Make Control Panel Checks

How to make control panel checks

- 1 If you see any of the symptoms detailed in section “Clearing the Stored Data” on page 5, follow the procedure in the same section.
- 2 On the control panel, use the **Test Buzzer, LEDs & Display** operator function. The buzzer and all LEDs and indicators are now activate. If any of these do not activate, investigate the fault.
- 3 On the control panel, check that the appropriate faults are reported. At this stage you have not connected the loops, so you should see the Fault LED lit, and No Response device fault events.

Set the Time and Date

At this stage set the control panel time and date.

Check the Firmware Issue

Check that the latest issue panel firmware is loaded onto the panel.

If later firmware needs to be loaded onto the panel, you need to use the FireClass Express application, running on a PC.

Downloading the configuration

Follow the steps below to update your panel. You need the firmware and site configuration loaded on a USB stick (drive).



Reference Document

For configuration/firmware update details, refer to the FireClass Express help file.

There are 3 levels of update available for the FC-FI based FireClass FC700 panels:

- Runtime Update: The panel has a working configuration.
- Startup Mode: The panel has correct firmware but no configuration.
- Rescue Mode: The panel does not have the required version of firmware.

Runtime Update

Use this mode for updating a preconfigured panel.

To use this mode you need to create a USB drive with a panel configuration in FireClass Express. To store the configuration of the panel to a USB drive, use the FireClass Express menu point Transfer >To USB > Panel Firmware and configuration. It is not necessary to select the firmware in the dialogue menu before transferring to the USB.

How to proceed in the control panel

- 1 Insert the H3 link and USB drive into the FC-FI board while the panel is running.
- 2 Login using the USER ID.
- 3 Select the panel menu point Configure > Service > Update Panel (See FireClass FC700 Series Panels User Guide).
- 4 Select the project which is applicable to the panel to update and press ENTER.
- 5 Select the panel to update and press ENTER.
- 6 Follow the instructions on the screen including confirming the update, removing the USB drive, removing the H3 link and restarting the panel.



Note

The H3 link and the USB drive must be removed before restarting the panel.

Startup Mode

Use this mode for updating the panel firmware and/ or panel configuration (node address of the panel, loading the menus in the local language, etc.) In order to use this mode you need to create a USB drive with the **Startup** info menu and panel configuration in FireClass Express.

How to proceed in the control panel

- 1 Ensure that the H3 link is fitted. Insert the USB drive into the FC-FI board. Press the SW2 (M RST) on the FC-FI momentarily.
- 2 The panel will restart in the **Startup Mode**.
- 3 Login using the USER ID and the PASSCODE provided when creating the **Startup** info in FireClass Express.
- 4 Press ENTER to select the appropriate project on the drive.
- 5 In the next screen, select the appropriate panel. The contents of the USB drive will download onto the panel. The contents include the firmware or configuration or both depending on the selection created within FireClass Express.
- 6 It is important to note the display messages and follow the prompts which include removing the H3 link and the USB drive and restarting the panel.

Rescue Mode



WARNING

The Rescue Mode should be used with caution as it changes the firmware of the panel and also looks for the GUI on a factory default IP.

Use this mode when updating the firmware or if the panel fails to boot and you have to rescue the panel by reloading its firmware. Note that using this mode will rewrite new firmware onto the panel.

Insert the USB drive containing the **Startup** info created using FireClass Express to USB socket on FC-FI.

In this mode the panel sets the address of the graphical user interface to IP:192.168.1.101 /Netmask: 255.255.255.0.

If the GUI IP addresses have been changed, then the same USB should be fitted to the GUI, login and set the GUI IP address to factory default using the factory settings button.

Creating and storing Startup Info to USB

- 1 Insert the USB drive into the PC.
- 2 Start FireClass Express and load the project file.
- 3 Set the path to the GUI firmware files (ubifs.img, ulmage) in the menu "Option > FireClass Express Options".
- 4 Activate the menu point "Transfer >To USB > Panel and GUI Startup Info".
- 5 Specify details for the Panel and GUI Startup Info.
- 6 Click "Transfer to USB" and wait for the transfer to complete.

How to proceed in the control panel

- 1 Insert the USB drive containing the panel **Startup** info to the XP (USB) socket.
- 2 Insert the J5:1 (M BOOT) link.
- 3 Press the SW2 reset button (M RST) on the FC-FI.
- 4 The panel will load the firmware from the USB drive into the panel and boot into the Startup Mode.
- 5 Follow the instructions from the section "Startup Mode" on page 2 to load a valid configuration.

FireClass FC700 GUI Update

Updating the GUI consists of updating its firmware and configuration. Both steps are essential when connecting the GUI to the panel.



Note

This operation requires a USB drive. This drive needs to be prepared using the transfer menu within FireClass Express and loaded with the appropriate firmware and configuration files to be used to perform the update.

GUI Firmware Update

To follow this procedure, you need to load a USB drive with the GUI Startup info in FireClass Express. Refer to the section "Creating and storing Startup Info to USB" on page 2. Follow the steps below to perform the Firmware update of the GUI.

There are two scenarios.

How to proceed in the GUI if firmware is damaged and GUI is not working

- 1 Insert the USB drive containing the GUI Startup info into the USB socket.

- 2 Activate the RESET button on the GUI momentarily (the small hole beneath USB socket).
- 3 Allow up to 120 seconds to start the update. Once the update is running, the update status is displayed on the GUI screen.
- 4 The GUI will now load the firmware from the USB drive onto the GUI.
- 5 Follow the instruction in the section "GUI Configuration Update" to load a valid configuration.

From GUI firmware version 3.0 onwards, this configuration is stored persistently and will not be overwritten during subsequent firmware updates.

From GUI firmware version 3.0 onwards and FireClass Express version 29.0 onwards, the GUI configuration updated and created by FireClass Express also includes any display-only repeaters and the RBus configuration of Ethernet GUIs; so the GUI configuration created by FireClass Express may be used, instead of the procedure below.

How to proceed in the GUI if the firmware and GUI are working properly

- 1 Log on with Engineer access level.
- 2 Insert the USB drive containing the GUI firmware. When the **Update GUI** screen appears, press **Firmware** and **confirm**.
Note: This screen is also available from **Configure -> Service -> Update GUI** when logged on at Engineer level and a USB with valid firmware is inserted.
- 3 The GUI performs the firmware update and restarts. This operation can take 10 minutes depending on the speed of the USB drive.
- 4 Follow the instructions in the section "" on page 3 to load a valid configuration.

How to access the manual configuration menu

- 1 With the GUI disconnected from the panel, press the **BACK » BACK » HOME » HOME** buttons slowly. Leave at least 0.5 seconds between presses.
- 2 Select the required mode. See the available options in Table 3.
- 3 Select the required RBus address to match the Fireclass Express configuration.
- 4 Select **Unmonitored** or **Monitored** based on the information in Table 4.

GUI Firmware Configuration

A number of GUI variants use common firmware, and this section describes how to manually configure the GUI Mode and RBus modes of a GUI.

Mode	Hardware	Description
Ethernet	FC1DS or FC1AS	Normal Ethernet operation without any standby emergency backup
Ethernet + Backup	FC1DS / FC1AS	Normal Ethernet operation with standby emergency backup over RBus (Requires LIO FW 1.8 for unmonitored backup and 1.11 for monitored backup, or higher on the PFI800)
Display only repeater	FC1D2	Repeater running on RBus

Table 1: Operational mode options

RBus Mode	Description
Monitored	If the RBus connection is lost, the panel raises a fault after approximately 30 seconds. An Ethernet display configured with a monitored RBus backup allows for limited interaction with the panel in standby emergency mode. This requires LIO FW 1.11 or higher and FireClass Express 29 or later.
Unmonitored	If the RBus connection to this device is lost, the panel is not alerted. Unmonitored repeaters must be configured as the same RBus address as a monitored repeater. An Ethernet display configured with an un-monitored RBus backup operates in a display-only, standby emergency mode.

Table 2: Monitored or unmonitored RBus modes

GUI Configuration Update

During the configuration process, the GUI IP address is set as 192.168.1.101, the Subnet mask as 255.255.255.0 and the Default Gateway mask as 192.168.1.1.

To use the configuration procedure, you need to create a USB drive with the GUI Startup info and GUI configuration in FireClass Express.

- Create and store the Startup info to a USB drive as described in "Creating and storing Startup Info to USB".
- To store the GUI configuration to the USB drive, use the FireClass Express menu point **Transfer -> To USB -> GUI Configuration** and **Zone Maps**. The **Zone Maps** option can be selected in the dialogue menu before transferring to USB.

How to proceed in the GUI

- 1 Log on with Engineer access level.
- 2 Insert the USB drive containing the GUI Startup information. When the **Update GUI** screen appears, press **GUI Configuration** and select the project, panel, and GUI to be updated.

Note: This screen is also available from **Configure -> Service -> Update GUI** when logged on at Engineer level and a USB with valid update configuration is inserted.

- 3 The GUI performs the configuration updates. It may restart afterwards depending on what was changed.

Firmware Update



Reference Document

If a LIOMCU firmware update is required, refer to the steps in the relevant Technical Information Bulletin (TIB).

Connect the Loops and Devices



NOTICE

Making inappropriate loop wiring changes may damage the control panel.

Before making loop wiring changes, or connecting the loop to the controller, follow these stipulations:

- Make sure you have tested the wiring and ensured that there is no fault.
- Power down the controller.

How to connect the loops and devices

- 1 Power down the control panel.
- 2 At the control panel insert the loop connectors into their FC-FI board sockets.
- 3 Set device addresses, using a FC490ST Loop Service Tool. If appropriate apply the devices' address labels.

- 4 Fit the detectors to their bases. Make sure all other addressable loop devices are in place.
- 5 Power up the control panel again and check that all faults are now cleared.

If you see any of the symptoms detailed in section "Clearing the Stored Data" on page 5, follow the procedure in this same section.

Test the Monitoring and Devices

How to test the monitoring and devices

- 1 When you perform the checks, be aware of any "cause and effect" rules in the control panel's configuration. You need to check for the correct system responses to the tests you have conducted.

For example, on the panel it may be the intention that activating a call point activates all sounders and door release mechanisms in the zone. You need to make sure this actually happens.

- 2 On the control panel, check that each device is activated correctly (for example, test the call points by inserting the activate key, test smoke detectors with a smoke aerosol can). If required, use the control panel's printing facilities to produce a hard copy check list.

- 3 Test the sounders (local and loop) by activating them:
 - Press the control panel **Evacuate** key (this issues an alarm).
 - In addition to pressing Evacuate, or as an alternative, activate a manual call point.

Check that each sounder is actuated.

After the test press the **SILENCE/RESOUND** key, then the **RESET** key.

Be aware of the possible nuisance caused by the alarms, and take any required measures.

- 4 To test the open circuit monitoring, disconnect any EOL resistors or associated circuits in the system. Ensure that the control panel reports the appropriate faults. When complete, restore the system to normal.
- 5 To test the short circuit monitoring, replace any EOL resistors or associated circuits in the system with a short circuit. Ensure that the control panel reports the appropriate faults. When complete, restore the system to normal.

Hand Over to the Customer

The hand over to the customer must be in accordance with standard Company instructions.

Ensure the following:

- The customer is provided with a copy of the cable routing diagrams and test results you have made.
- The customer knows how to operate the panel, and is aware of any local regulations in force.
- The customer knows the User IDs and associated access codes for the panel.
- The customer has access to the FireClass FC700 Series Panels User Guide.

- No documentation is left in the Controller housing or any other associated housing.

Clearing the Stored Data

Only follow this section if referred here from elsewhere in the guide.

Clear the stored data if the control panel displays the following symptoms:

- No keys are operative.
- The **SYSTEM FAULT LED** is lit (on the front panel).

How to clear the Stored Data

- 1 Fit jumper J5-H2 on the FC-FI board
- 2 Briefly press SW2 (M RST) Reset button.
- 3 Wait for 15 seconds.
- 4 Remove H2 and repeat step 2.



FC-FI Headers

For information on the various headers and connectors on the FC-FI board, refer to the FireClass FC700 Series Panels Installation Guide.

If the fault occurs again, replace the FC-FI board.

Consignment Note



Note on Firmware Update

While commissioning the panel, please check the version number of the factory-loaded firmware, as described in the user guide. If the panel firmware is not the latest version, update to the latest firmware using FireClass Express, as described in this document.

Table 3 lists the items that should be shipped with the FC702S, FC702D, FC718D, and FC708D controllers.

Item	Part No.	Unit (FireClass FC700 Series...)			
		FC702S	FC702D	FC718D	FC708D
CON PLUG 02P RM3.5 SCREW TERM	125.261.368	1	1	1	1
CON PLUG 02P RM5 SCREW TERM	125.261.369	12	12	12	12
CON PLUG 04P RM5 SCREW TERM	125.261.296	3	3	5	5
CON PLUG 03P RM3.5 SCREW TERM	125.261.371	2	2	2	2
CON PLUG 03P RM5 SCREW TERM	125.261.372	4	4	4	4
RES M-FILM 10K 0.6W 1% MRS25	125.652.103	2	2	2	2
RES STD 2K 1% 0W6 METAFILM TH	125.652.202	2	2	2	2
CAP ALU BIPOL 330u 50V 20% TH	125.800.705	2	2	2	2
UNIVERSAL FIXING PLUGFISCHER U	2400286	4	4	4	4
WOODSCREW 10 X 2.5" ROUDNHEAD	2400489	4	4	4	4
SCREW M3 X 6 PAN	115.858.034	5	5	5	5
ROHS CABLE TIE BASE	120.207.082	2	2	2	2
ROHS CABLE TIE 115MM LG 2.5MM	120.207.064	10	10	10	10
DR RFID CARD ARTWORK	120.447.227	2	2	2	2
ROHS FUSE KIT INLINE (BATTERY)	125.024.183	1	1	1	1
CABLE ASSY BATTERY S	125.121.293	1	1	1	1
CABLE TEMP SENSOR	125.121.319	1	1	1	1
ISO 7045 SCREW M5X6	115.858.064	4	4	4	4
CABLE ASSY 64WAY IDC TO 2x 50WAY IDC RIBBON	125.121.326	1	x	x	x
FIRECLASS LOGO	120.447.222	1	1	1	2
MAINS TERMINAL BLOCK COVER	2000944	1	1	1	1
HAZARD SYMBOL LABEL	2200395	1	1	1	1

Table 3: Shipped Items