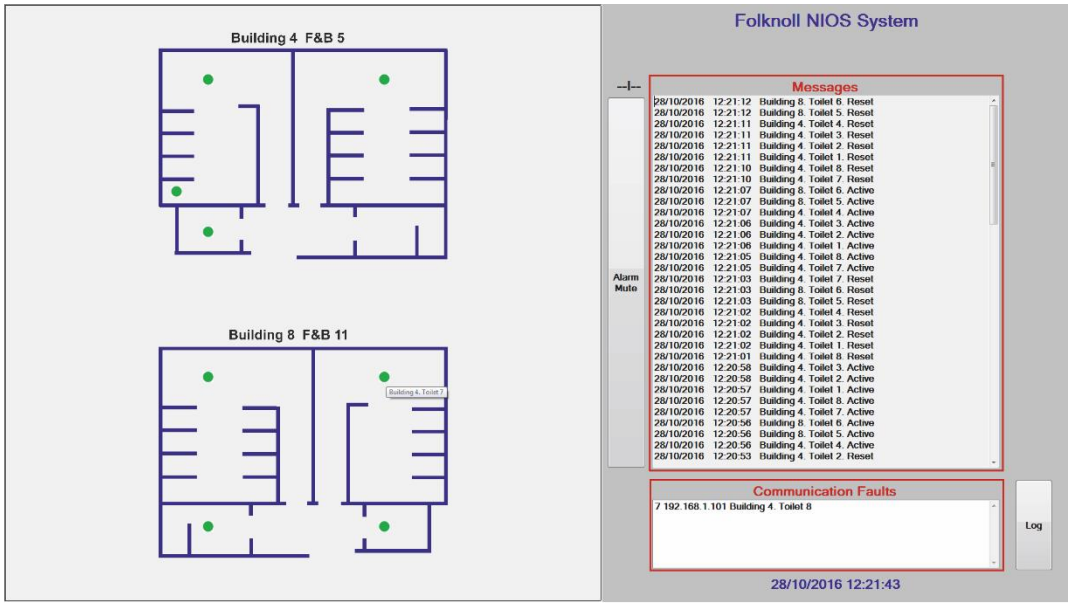
Folknoll Group Ltd.

EMERGENCY ASSISTANCE ALARMS



NIOS APP MANUAL

NETWORK ALARM MONITORING

ISSUE

VERSION	DATE	DESCRIPTION
V1.00	21.11.2016	Original
V1.01	10.07.2017	Added typical system diagram
V1.02	12.03.2018	Added Modbus TCP/IP connection
V1.03	24.07.2019	Update for NIOS V3. Added icon configuration, graphic configuration, setup file clarified communications fault, changed to emergency assistance alarm

CONTENTS

1 INTRODUCTION

This document is the NIOS App Manual for Folknoll Group Ltd Emergency Assistance Alarms.

1.1 DESCRIPTION

The NIOS App is a Windows® PC Application intended to be used as a remote monitoring workstation for Folknoll Emergency Assistance Alarms installed in accessible /PRM/disabled toilets, showers, etc. The NIOS App has a user-friendly graphical interface comprising a site plan and control panel display. The site plan shows alarm icons indicating the location and status of alarms. The control panel shows a list of current alarms offers controls options. The App maintains an event log that can be displayed in the control panel. The App can also be used to generates a data stream for remote monitoring by BMS and other devices.

1.2 FOLKNOLL EMERGENCY ASSISTANCE ALARMS

The Folknoll alarm system allows users to call for assistance in emergency. A typical system comprises a pull cord unit and reset button located inside a toilet with a beacon / sounder located outside the toilet. The beacon sounder is usually near the toilet door to indicate the source of the alarm. If assistance is required, the user pulls the pull cord and activates the alarm. The beacon sounder outside the toilet sounds and flashes to attract attention. Staff respond to the alarm and assist the user. An acknowledge or accept button maybe fitted outside the toilet, NIOS systems can also be acknowledged by the App. Acknowledging the alarm silences the sounders and causes beacons to illuminate continuously. The purpose of acknowledging the alarms is to reassure the user that help has arrived / is coming and make voice communication easier. When the situation has been resolved the reset button inside the toilet is pressed to turn off the alarm and reset the system ready for the next activation. If an alarm is not reset within two minutes of being acknowledged the alarm sounders are reactivated and the beacons will start to flash.

1.3 ABOUT US

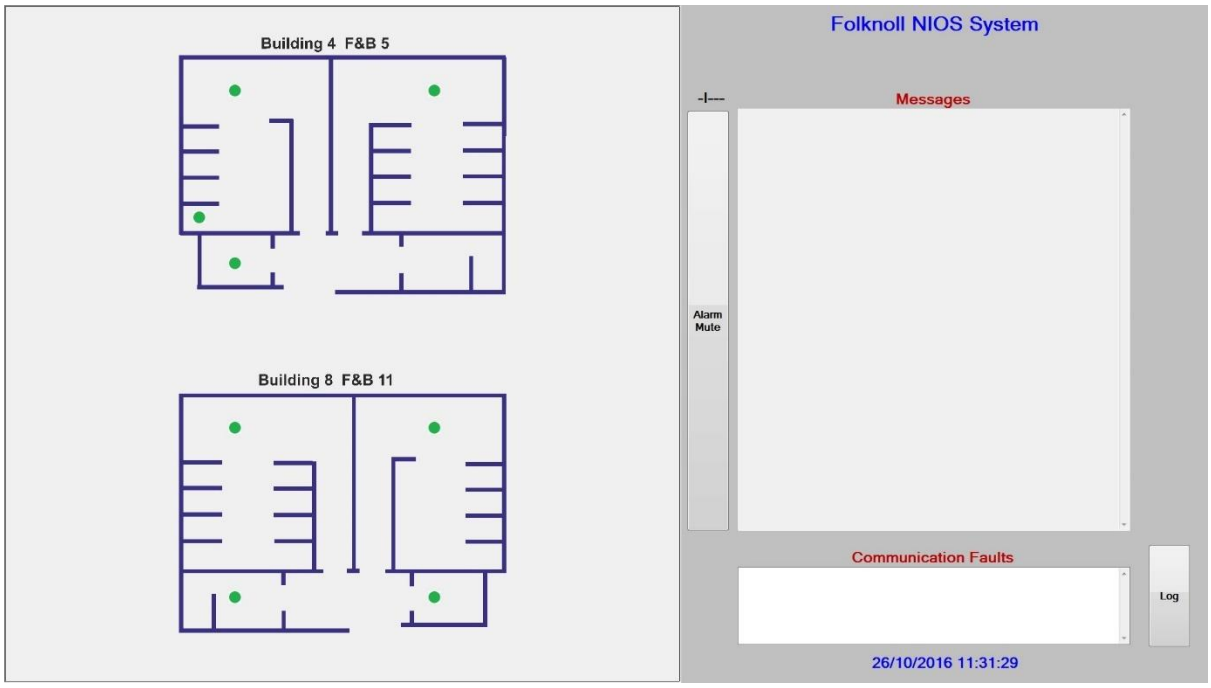
We are a UK based company with over 30 years of design and manufacturing experience. All of our products and systems are designed for toughness, reliability, easy installation, simple configuration, straightforward operation and low maintenance. As original manufacturer, all of our product ranges can be customised to suit your application, including custom engraved panels, additional features and special systems.

Please contact us for further information about our wide range of products and services and find out how we can provide a solution for you.

2 NIOS APP

2.1 LAUNCHING THE NIOS APP

The NIOS App is automatically launched when the PC is powered on. The PC screen should show a NIOS screen similar to the image below.

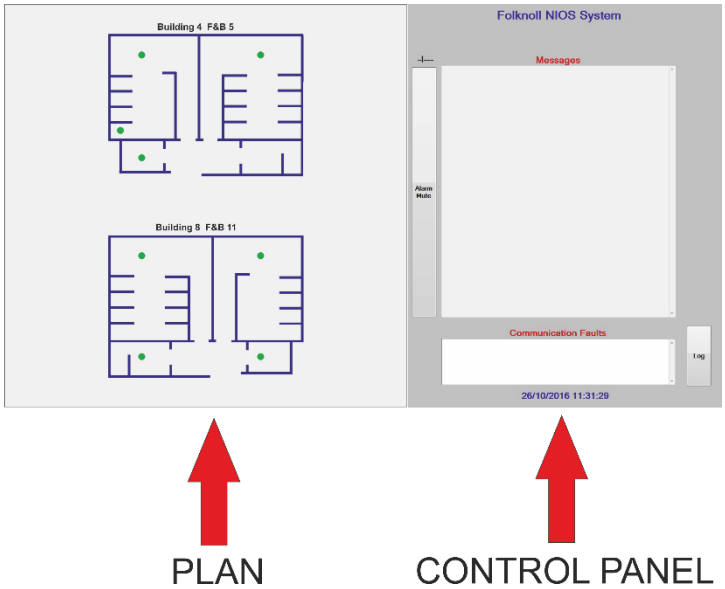


If it is not running the App may also be launched from the start menu or the desktop icon.

NOTE: The NIOS App should be running and displayed at all times to enable operators, BMS or other remote device to monitor alarms and system faults. Please refer to section 7 BMS Interface.

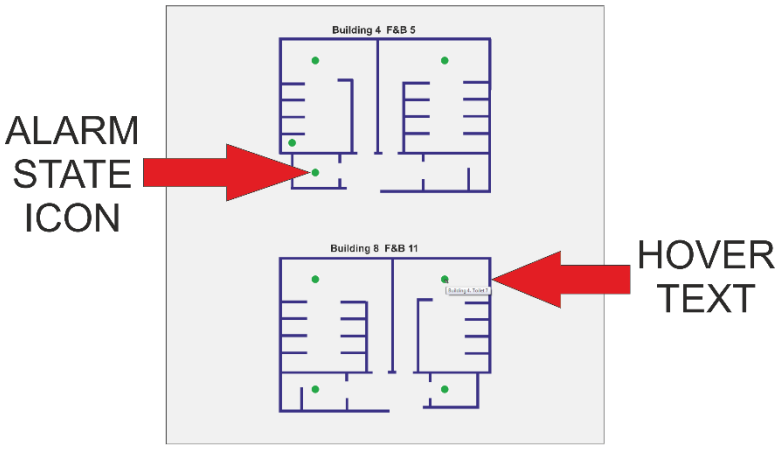
3 NIOS APP DISPLAY

The NIOS App display comprises two panels, a site plan on the left and a control panel on the right.



3.1 SITE PLAN (LEFT SIDE)

The plan shows a diagram of the site with alarm state icons positioned to represent the location of alarms.



If the PC mouse is hovered over an alarm state icon, a description of the alarm source is displayed to help identify the alarm. E.g.

"Building 4 Toilet 7"

Alarm state icons can also be used to acknowledge activated alarms, please refer to section 4.3 Alarm Acknowledge

3.1.1 Alarm State Icons

Alarm state icons are changed to indicate the current state of their associated alarm.

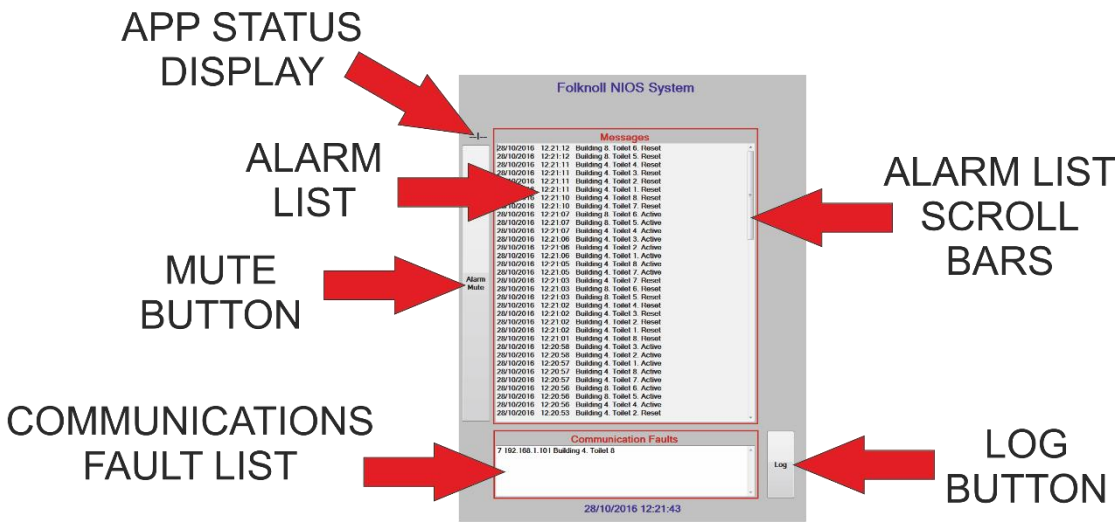
ICON	ICON STATE	ALARM STATE	ACTION
	QUIESCENT	The alarm is not activated.	No action required.
	ACTIVATED	The alarm has been activated e.g. a pull cord has been pulled. Please refer to section 4.1 Alarm Activation.	Staff should assist user.
	ACKNOWLEDGED	The alarm has been activated and acknowledged. Please refer to section 4.3 Alarm Acknowledge.	Normally implies staff are on their way or attending the incident.
	FAULT	A fault has occurred. please refer to section 5 NIOS Fault Display.	Report fault according to local procedures.

NOTE: The alarm state icons are configurable. Throughout this manual we will use the standard icons above and refer to them as the QUIESCENT STATE, ACTIVATED STATE, ACKNOWLEDGED STATE, and FAULT STATE icons. Your system may have different icons please refer to section 10 Alarm State ICON.

3.2 CONTROL PANEL (RIGHT SIDE)

The control panel is located to the right of the display and comprises:

- the App Status Display
- the Message List
- the Communication Faults List
- the Alarm Mute Button
- the Log Button



3.2.1 App Status Display

The App Status Display should continually move left and right to indicate that the App is poling the alarms and operating normally.

IF THE STATUS DISPLAY IS STATIONARY THIS IS A FAULT, report the fault according to local operating procedures. If allowed by local operating procedures, try rebooting the App to continue monitoring alarm.

3.2.2 Message Display

The Messages List usually shows a list of current alarms, if no alarms are shown there are no outstanding alarms. The example above shows a number of alarm active and alarm reset messages.

The alarm list can also be used to show entries from the event logs. Please refer to section 11 NIOS Event Logs.

3.2.3 Communication Faults List

Below the Message List is a small area reserved for outstanding communication fault. Any permanent faults should be reported according to local procedures. The example above shows a single communications error caused by a network failure.

3.2.4 Alarm Mute Button

The Alarm Mute Button disables and enables the NIOS PC alarm and fault warning tones. The button is located to the left of the Messages List.

Left clicking on the Alarm Mute the turns off the alarm tones for the current alarm. If another alarm occurs the mute is overridden and the alarm tones will sound again.

WARNING!

ALARM TONES MAY ALSO BE MUTED USING PC KEYBOARD CONTROLS AND WINDOWS SOUND CONTROLS, USING THESE CONTROLS COULD PREVENT ALARM TONES BEING HEARD IN AN EMERGENCY.

3.2.5 Log Button

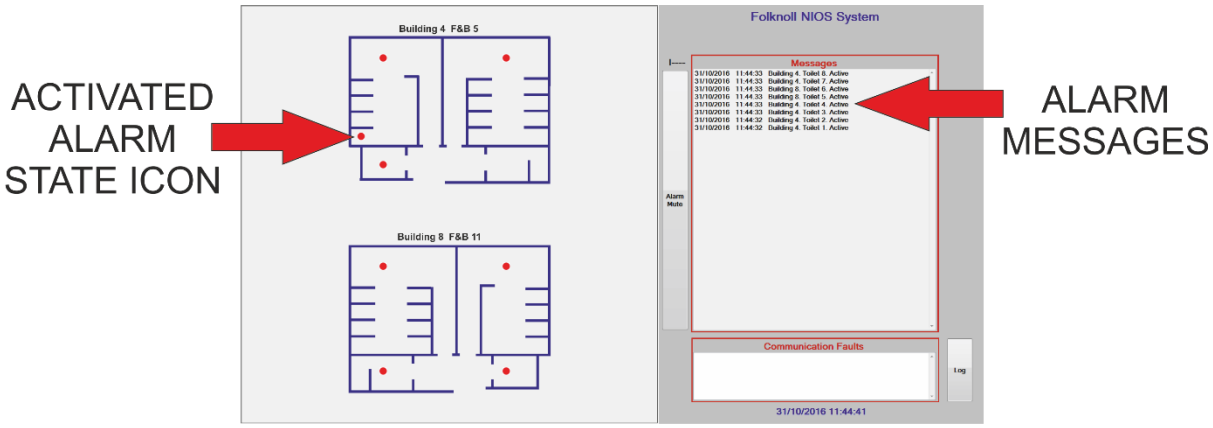
The Log Button displays an event log in the Message List. The Log Button is located below the Log List at the right of the Communication Faults List. Please refer to section 11 NIOS Event Logs.

4 NIOS ALARM EVENTS

4.1 ALARM ACTIVATION

If an alarm is activated, for example when a user pulls a cord:

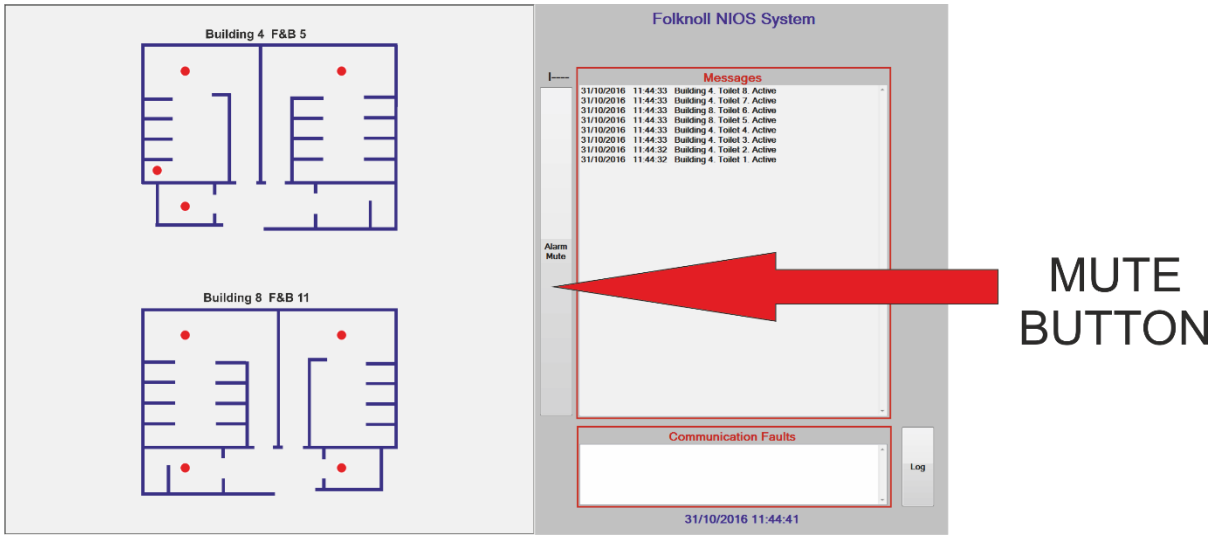
- the NIOS PC will generate an audible warning tone
- the icon representing the source of the alarm will be changed to the activated state icon
- an alarm message will be displayed in the Messages List



The image above shows activated state icons for all alarms sources.

4.2 ALARM WARNING TONE MUTE

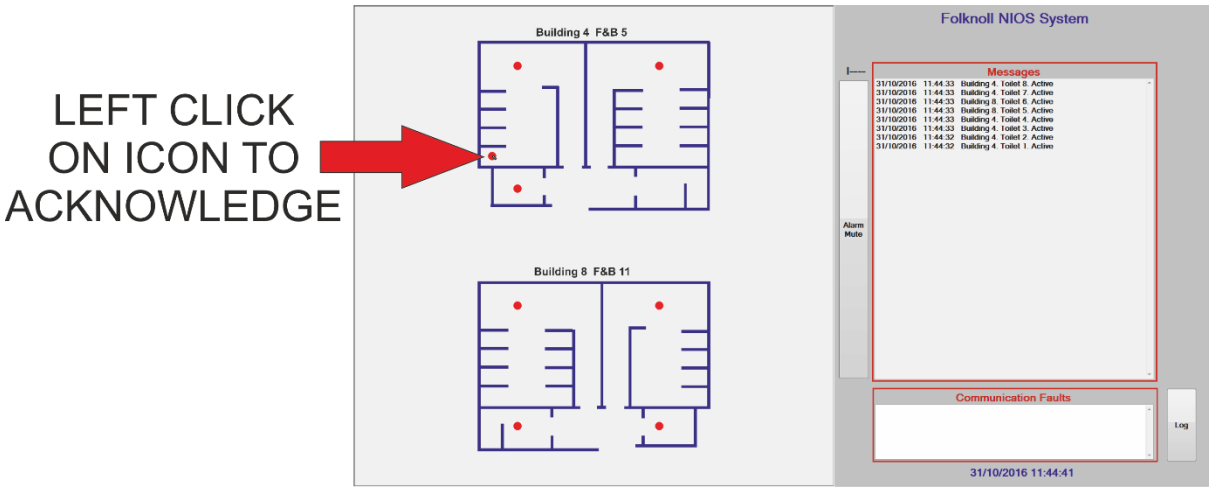
The alarm warning tone can be muted and un muted by left clicking on the Alarm Mute button located next to the Messages List. Please refer to section 3.2.4 Alarm Mute Button.



4.3 ALARM ACKNOWLEDGE

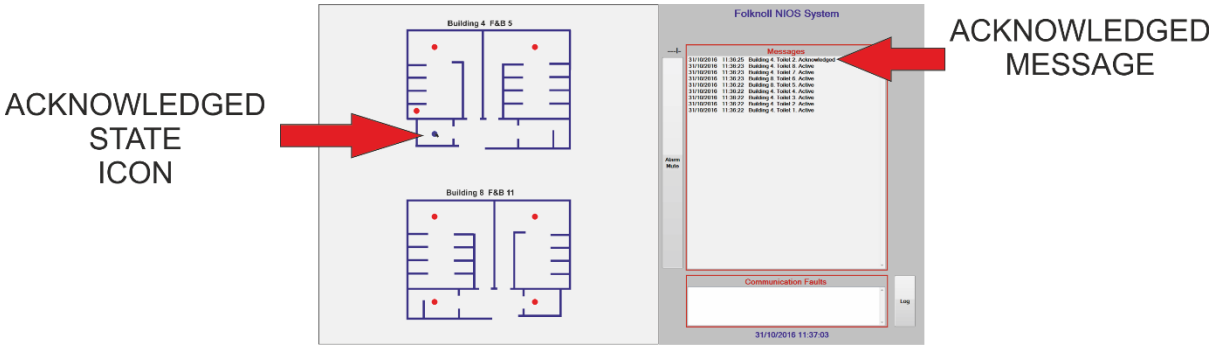
Folknoll alarms may be acknowledged to reassure users help is coming. On acknowledge local sounders are silenced and local beacons are illuminated instead of flashed, please refer to section 1 Folknoll Emergency Assistance Alarms.

To acknowledge an alarm, left click on the icon representing the source of the alarm.



When an alarm is acknowledged:

- The icon representing the alarm source will be changed to the acknowledged state icon
- An acknowledged message will be displayed in the Message Log



The above image shows an acknowledge state icon for one alarm source.

4.4 ALARM RESET / CANCEL

After the incident has been resolved the alarm should be cancelled and reset, ready for the next activation.

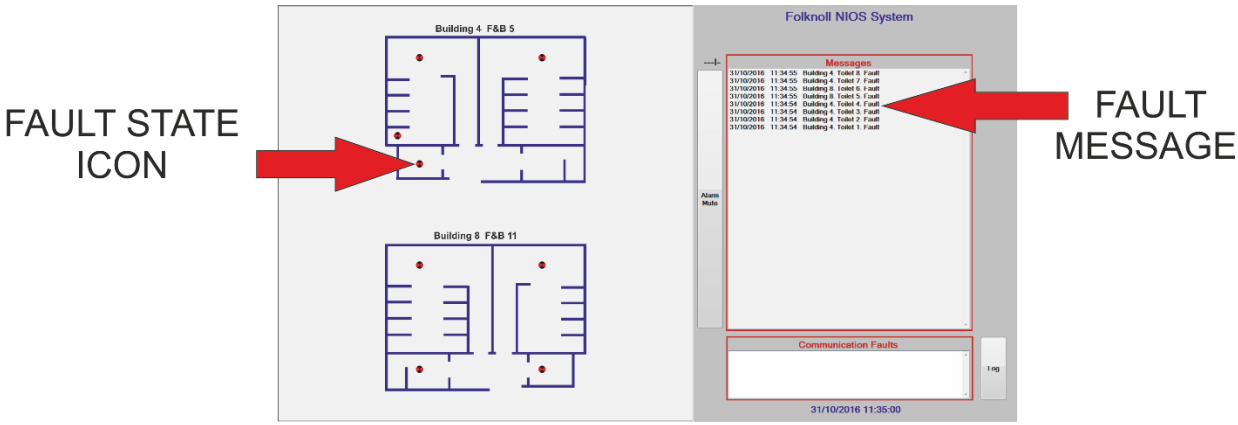
Emergency assistance usually cannot be reset remotely. To reset / cancel press the reset button located inside the toilet.

5 NIOS FAULT DISPLAY

5.1 ALARM FAULTS

If a fault occurs:

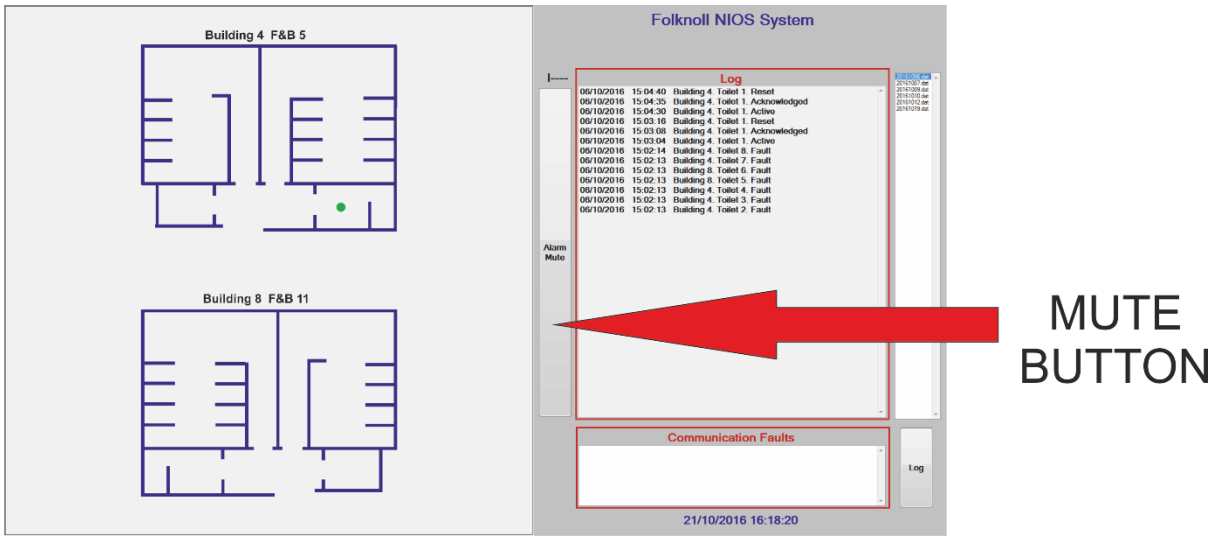
- the NIOS PC will generate an audible warning tone
- the icon representing the alarm source will be changed to the fault state icon
- a fault message will be displayed in the Messages List



The image above shows standard fault state icons and fault messages all alarm sources.

5.2 FAULT WARNING TONE MUTE

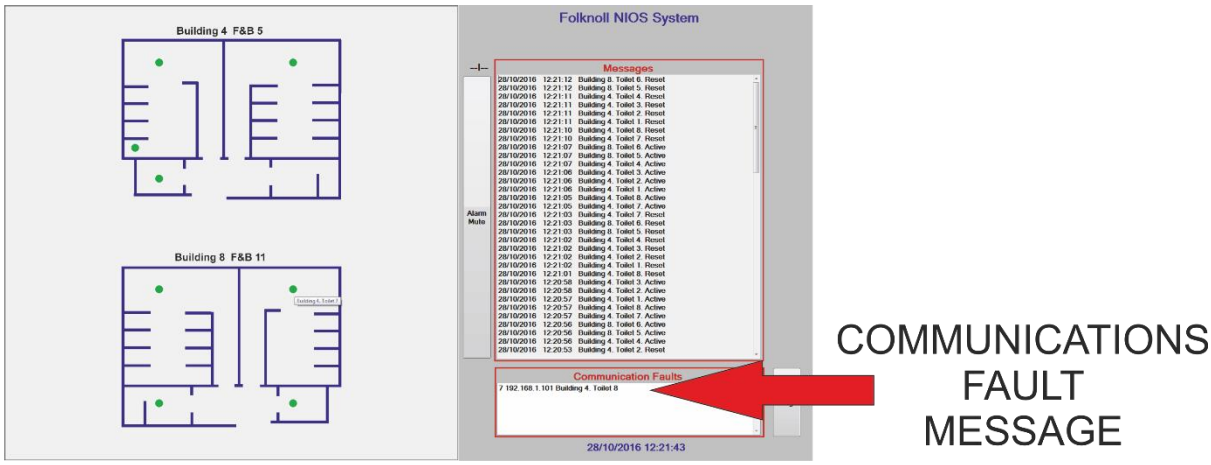
The fault warning tone can be muted by left clicking on the Alarm Mute Button located next to the Messages List. Please refer to section 3.2.4 Alarm Mute Button.



5.3 COMMUNICATION FAULTS

If a communications fault occurs:

- a fault message will be displayed in the Communication Faults List



5.4 FAULT RESET / CANCEL

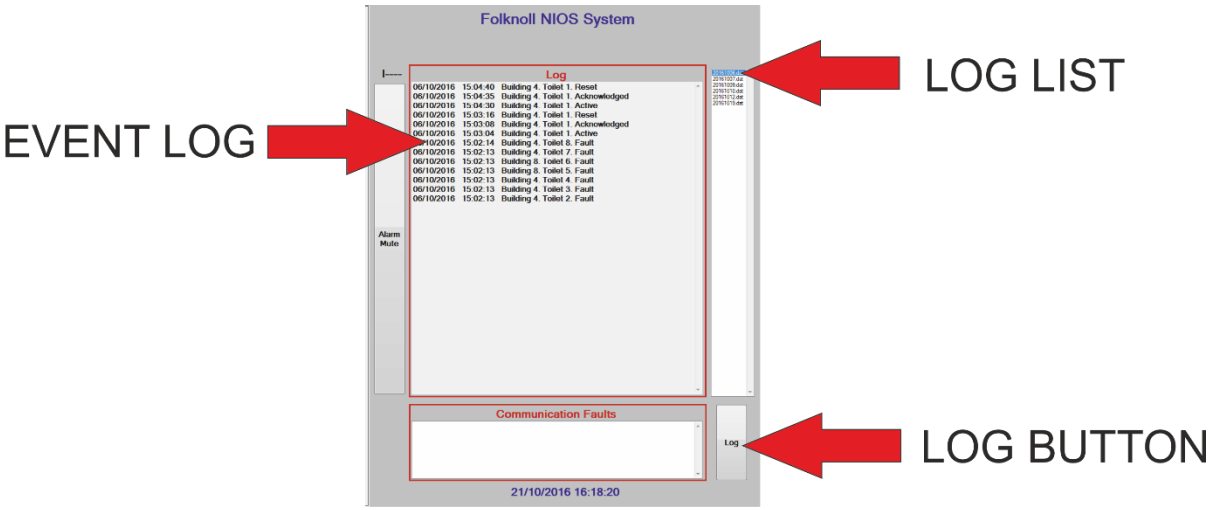
Faults cannot be reset. Fault messages will be removed when the issue has been resolved. Faults should be reported according to local procedures.

6 NIOS EVENT LOGS

The NIOS App maintains logs of alarm and fault events.

Log entries are stored in ASCII format for an indefinite period.

Logs can be displayed in the Messages List when in Log Mode.



6.1 CHANGING TO LOG MODE

To enter Log Mode from Normal Mode left click on the Log Button.

The Log List will be displayed to the right of the Message List.

To return to normal mode left click on the Log Button.

The Log List and any log events shown in the Message List will be removed.

6.2 VIEWING EVENT LOGS

Event logs are viewed in the Message List.

To display an event log, enter Log Mode, please refer to section 6.1 Changing to Log Mode, then left click on the required log in the Log List.

To select another log, click on the required log in the Log List.

If the log is too large for the Messages List, scroll bars will be displayed allowing the event log to be scrolled up and down.

7 BMS INTERFACE

The NIOS App continuously generates a data stream for monitoring by a BMS or other remote system. If the BMS Interface is in use the NIOS App PC must be powered up and the NIOS App must be left running at all times.

WARNING!

IF THE BMS INTERFACE IS IN USE AND THE NIOS PC IS SWITCHED OFF OR THE NIOS APP STOPPED / CLOSED THE NIOS BMS INTERFACE WILL ALSO BE DEACTIVATED. IF THE BMS INTERFACE IS DEACTIVATED, OR DISCONNECTED, THE BMS OR OTHER REMOTE MONITORING DEVICES WILL NOT BE ABLE TO MONITOR NIOS ALARMS AND MAY ACTIVATE A NIOS SYSTEM FAULT ALARM.

7.1 BMS INTERFACE CONFIGURATION

BMS interface requires a Windows® serial Com Port. The BMS Com Port is determined by the value of CommPort in the Setup file. To change setup file values, please refer to section 10 Setup File.

7.2 BMS INTERFACE SERIAL CONVERTOR

If the PC supplied does not have a serial port a USB to RS232 convertor may be supplied to connect to the BMS system. Please refer to the serial convertor documentation for further details.

7.3 BMS INTERFACE FORMAT

The data stream entries are ASCII text terminated with cntr 13 & cntr 10.

Each entry is in the same format as Message Window.

8 ENGINEERING MODE

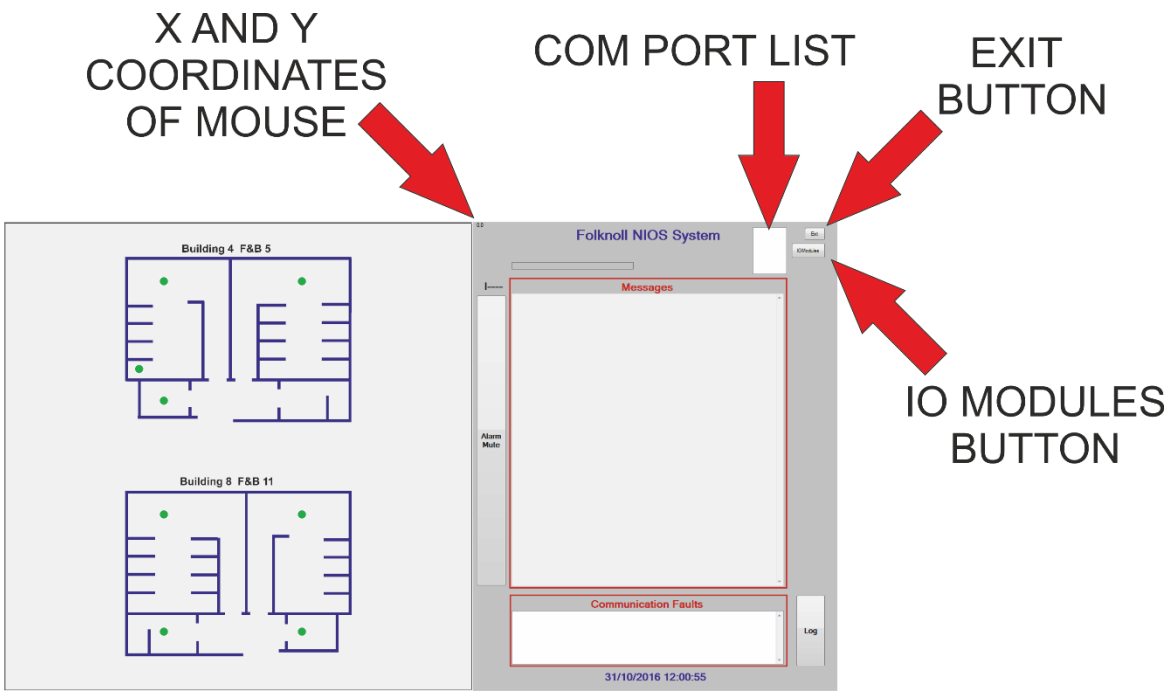
GUI icons, alarm text and alarm network sources IP address, etc. are configured from engineering mode.

8.1 CHANGING TO ENGINEERING MODE

To change to engineering mode from normal mode press CTL-SHIFT-Z on the PC keyboard.

The display will change to show:

- the xy coordinates of the mouse
- an Exit Button
- list of available com ports
- IO Modules Button



To change back to normal mode from engineering mode press CTL SHIFT Z on the PC keyboard.

8.2 X AND Y COORDINATES

During configuration icons are located on the plan by defining there X and Y coordinates.

To determine the X and Y coordinates of a location on the plan, click on the required location, its coordinates will be shown in the top left corner of the control panel.

8.3 EXIT THE NIOS APP

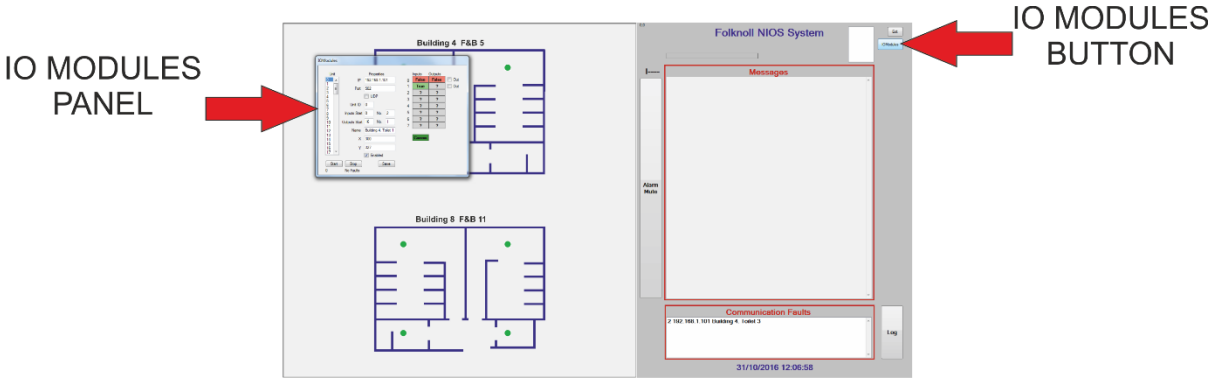
To exit the NIOS App, enter engineering mode, please refer to 8.1 Changing to Engineering Mode, then left click on the Exit Button. The App will close and the PC will revert to the Windows® desktop.

8.4 COM PORT LIST

The Com port list shows the Windows com ports available for the BMS system. This information is not usually required.

8.5 CONFIGURING ALARMS

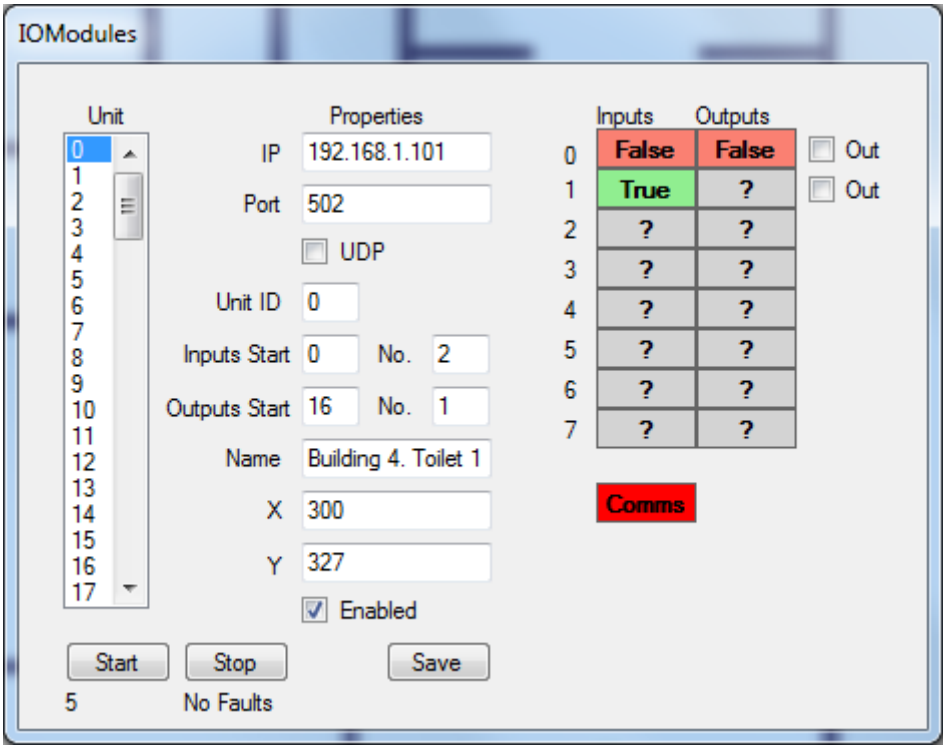
To display the IO Modules Panel enter engineering mode, please refer to 8.1 Changing to Engineering Mode, and left click on the IO Modules Button. The IO Modules Panel will be displayed.



8.6 IO MODULES SETTINGS

To change the settings for an IO Modules i.e. alarm source, display the IO Modules panel, please refer to section 8.5 Configuring alarms, select the required unit from the drop down list, change the settings then press the Save Button.

The IO Modules settings are described below:



8.6.1 Unit

Number assigned to alarm source at configuration time to enable identification of the alarm source for administrative purposes only.

8.6.2 IP

IP address of alarm interface, please refer to the network administrator and IP interface documentation.

8.6.3 Port

Port number used by the alarm interface, please to refer to the network administrator and IP interface documentation.

8.6.4 UDP

Tick this box if using UDP, please to refer to the network administrator and IP interface documentation.

8.6.5 Unit ID

Number assigned to IP interface module at configuration time to enable identification of module for administrative purposes only.

8.6.6 Inputs Start

First input on module used for this alarm source. In the example above the first input is 0.

8.6.7 No

Number of inputs on module used for this alarm source. In the example above two inputs are used one for alarm one for fault.

8.6.8 Outputs Start

First output on module used for this alarm source. In the example above the first output is 16.

8.6.9 No

Number of outputs on module used for this alarm source. In the example above one output is used one for acknowledge.

8.6.10 Name

Text description of alarm shown in alarm log and when the mouse is hovered over its icon in the site plan.

8.6.11 X

X-coordinate of the location of the icon on the plan. To determine the coordinates of a location on the plan, please refer to section 8.2 X and Y Coordinates.

8.6.12 Y

Y-coordinate of the location of the icon on the plan. To determine the coordinates of a location on the plan, please refer to section 8.2 X and Y Coordinates.

8.6.13 Enabled

Check this box to enable monitoring of the alarm source.

8.6.14 Inputs, Outputs, Out, Out

These boxes display the condition of the inputs and outputs configured above for diagnostic purposes.

8.6.15 Comms

The Comms box indicates the communications status.

- Green => Comms ok
- Red => Comms failed

8.6.16 Start

Press the Start Button to start alarm monitoring.

8.6.17 Stop

Press the Stop Button to stop alarm monitoring.

8.6.18 Save

Press the Save Button to saver the current configuration.

8.6.19 No Faults

Displays the current number of system faults.

8.7 HIDING THE IO MODULES PAGE

To hide the IO Modules page left click on the display outside of the IO Modules page.

9 NIOS GRAPHICS CONFIGURATION

The NIOS graphics / background / plan is generated from a graphics file located in the folder:

"Documents/Folknoll/NIOS"

By default, the graphics filename is "work1.wmf".

9.1 CHANGING THE NIOS GRAPHIC

To replace an existing NIOS graphic:

- Exit the NIOS app and return to windows
- Obtain / create the required graphic
- Overwrite the file (usually "work1.wmf") containing the current icon with the file containing the new icon
- Restart the NIOS App

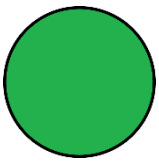
9.2 CHANGING THE NIOS GRAPHIC FILENAME

The filename of the NIOS graphic is determined by the value of Graphic in the setup file. To change setup file values, please refer to section 11 The Setup File.

10 ALARM STATE ICON CONFIGURATION

The alarm state icons are generated from graphics files located in the folder:

"Documents/Folknoll/NIOS"

STANDARD ICON	COMMON ALTERNATIVE	FILENAME
		zNormal.png
		zAct.png
		zAck.png
		zFault,png

10.1 CHANGING THE ALARM STATE ICONS

Alarm state icons are normally changed to match and provide contrast with current site graphic.

To replace an existing alarm state icon:

- Exit the NIOS app and return to windows
- Obtain / create the required icon
- Overwrite the file containing the current icon with the file containing the new icon
- Restart the NIOS App

10.2 ALARM STATE ICONS SIZE

The size of the alarm state icons is determined by the value of IconSize in the setup file. To change setup file values, please refer to section 11 The Setup File.

11 THE SETUP FILE

The Setup file contains a number of parameters that affect the operation of the NIOS App. This file is factory configured and should not usually be changed on site.

The Setup file is located the folder:

"Documents/Folknoll/NIOS/Setup.ini"

The Setup file a text file that can be edited using a standard text editor e.g. "Notepad".

11.1 EXAMPLE SETUP FILE

The setup file will look similar to the following

```
[General]
AutoStart=True
TamperEnabled=True
ZoneCount=100
Graphic=work1.wmf
CommPort=COM3
SoundAlarm=SoundAlarm.wav
CommsDelay=1000
IconSize=20
```

11.2 TO CHANGE A SETUP FILE PARAMETER

- Exit the NIOS app and return to windows
- Open Setup.ini in a text editor
- Change the required parameter (be careful not to change any other values as this be detrimental to NIOS performance)
- Save the modified Setup.ini file
- Restart the NIOS App

11.3 SETUP FILE PARAMETERS

PARAMETER	VALUE
AutoStart	Do not change
TamperEnabled	Do not change
ZoneCount	Do not change
Graphic	Filename of plan (graphic)
CommPort	BMS interface Windows® serial Com Port
SoundAlarm	Filename of alert sound
CommsDelay	Poling Speed
IconSize	Size of alarm State Icon

12 MODBUS TCP/IP CONNECTION

IP address	Unique to each end point (e.g. 192.168.100.1)
Modbus port number	502
TCP or UDP	TCP
Unit ID	0
Input 0	Call active when High
Input 1	Fault when Low, an internal fault has been detected (Optional).
Output 17	Call Acknowledge, High for 1000ms.

The front-end application will also have to monitor for communications failure.

13 TYPICAL SYSTEM