

Elotec Confire Wireless Fire Alarm

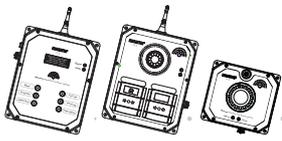
Base Station - Call Point - Smoke Detector - Heat Detector

Installer and Operator Handbook



ELOTEC

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1.1 Document Release

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1.2 Contact

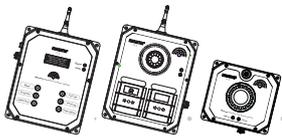
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2 Introduction

2.1 Revision History

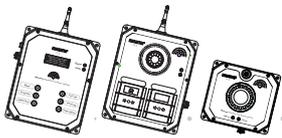
Revision history for the document is given in the table below.

Revision	Date	Revision Details

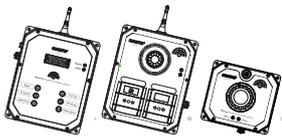
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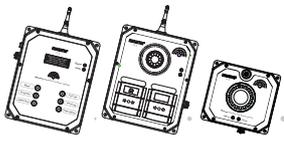
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2.3 Terms and Abbreviations

- NOTE** A note is intended to draw the users attention to an important part of the handbook.
- CAUTION** A caution denotes an instruction or advice to the user. Failure to comply with a caution may result in malfunction or unexpected behaviour of the equipment.
- WARNING** A warning denotes an instruction or advice to the user. Failure to comply with a warning may result in harm or injury to personnel or property.
-  The Crossed out EN 54 symbol denotes an optional configuration or feature of the system whose use is not covered by, or violates, a section of the EN 54 standard. The use of such features is not covered by the product's EN 54 certification. The user is responsible for enabling or disabling such features and does so at their own discretion.

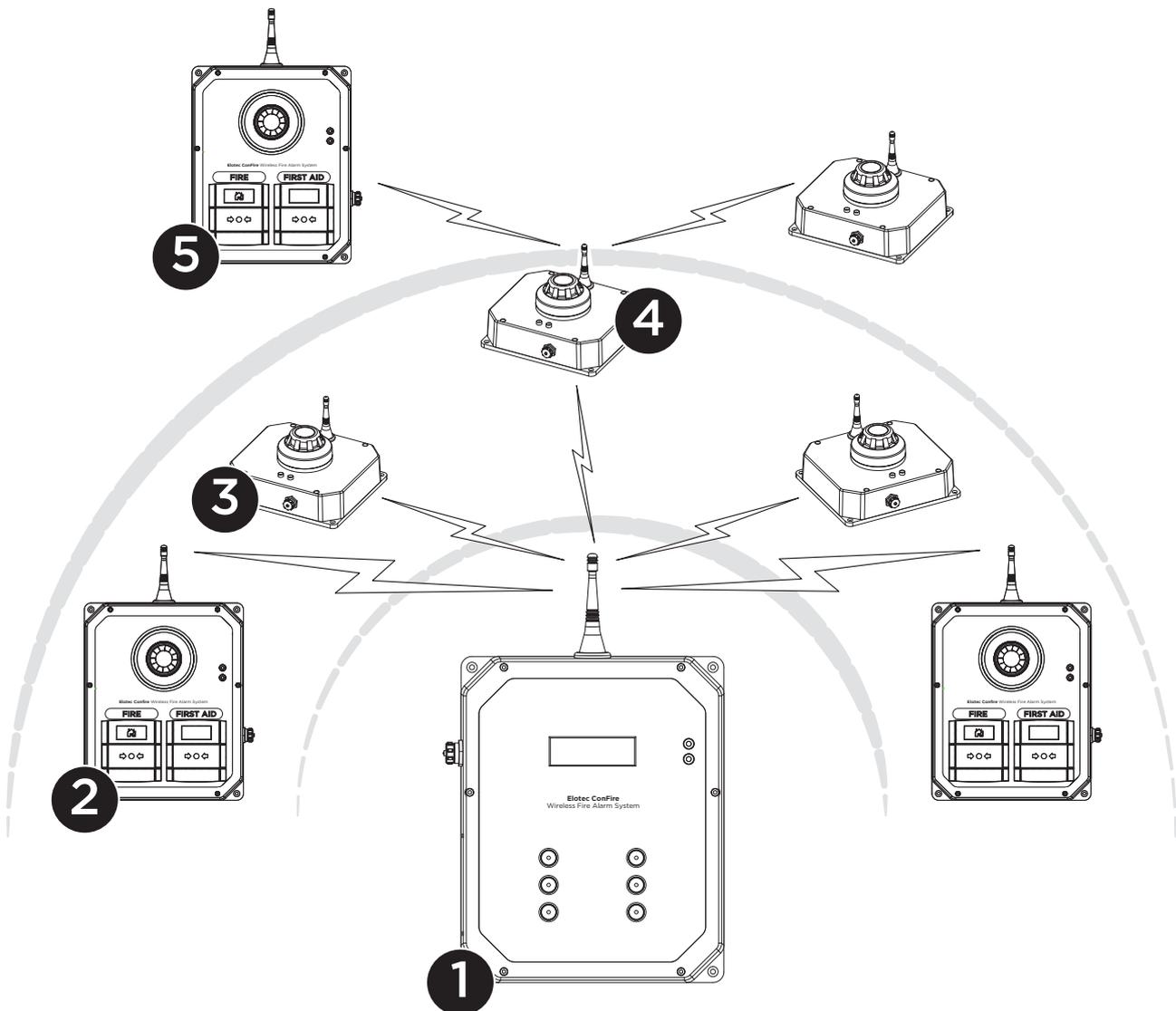


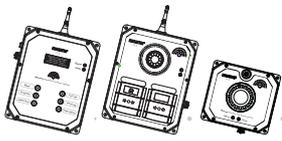
2.4 Elotec ConFire Fire Detection and Fire Alarm System

2.4.1 About

The Elotec ConFire Fire Alarm series provides an EN 54 compliant modular Fire Detection and Fire Alarm (FDAS) solution aimed, primarily, at the construction industry. The system is made up of devices for smoke / heat detection, manual fire and first aid Call Points and a Base Station for status and fault indication.

Each element of the Elotec ConFire Fire Alarm Series communicates to the other devices using radio frequency (RF) links which permit rapid deployment and reconfiguration of the site as needed. Additionally, the smoke / heat detectors and manual fire and first aid Call Points are battery operated – avoiding the need for fixed infrastructure and cabling.





Key:

- 1 – Elotec Confire Base Station (ELOTEC CONFIRE)
- 2 – Elotec Confire Call Point (CONF-CP)
- 3 – Elotec Confire Detector:
 - with A1R type heat detector head (CONF-HEAT)
 - with Optical smoke detector head (CONF-OPT)
- 4 – Elotec Confire Heat / Smoke Detector acting as mesh extended network node
- 5 – Elotec Confire Call Point connected to the network via mesh extended network node

Highly Configurable, Readily Adaptable – The Elotec Confire radio network supports up to 240 units consisting of any combination of Call Points, heat detectors and smoke detectors. Units can be added and removed from the network as the site dictates.

Extended “Mesh” Network – Elotec Confire Call Points, Heat Detectors and Smoke Detectors automatically create a mesh network. Units that are unable to communicate with the Base Station directly can pass their messages through other Elotec Confire units that are able to communicate with the Base Station. The Elotec Confire mesh network allows the range of the Fire Detection and Alarm System to be extended and to cope with problematic radio signal propagation without the need to install a specific “repeater” type unit.

First Aid Call – Elotec Confire Call Points include both Fire and First Aid Call Points. A different audible alert is used to distinguish between Fire and First Aid.

Zones – Elotec Confire Call Points, Heat Detectors and Smoke Detectors can be placed into “Zones”. The audible evacuate alarm can be configured to evacuate the whole site, or just the zone in which the alarm was triggered. The Base Station reports both the unit’s identity (unit ID) and its zone.



2.4.2 Quick Start

This section is intended to provide the installer with enough information to get the Elotec Confire Fire Detection and Alarm System up and running. Further detail is provided throughout the remainder of the document.

2.4.2.1 Creating the Network

The Elotec Confire network must be configured for use (this may have been carried out at the factory).

You will need:

1. USB-A to USB Mini-B Cable
2. PC running Elotec Confire Tool

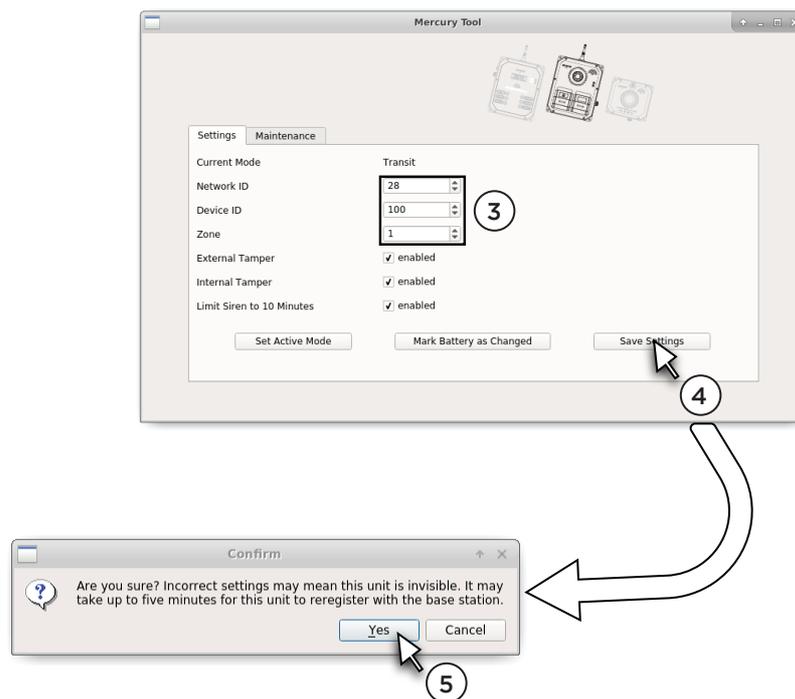
NOTE: Some minor variations may exist between Windows, Linux and Tablet versions of the software. The Linux version is shown in these instructions. Features may be added, removed or modified at any time.

2.4.2.1.1 Configuring the Unit

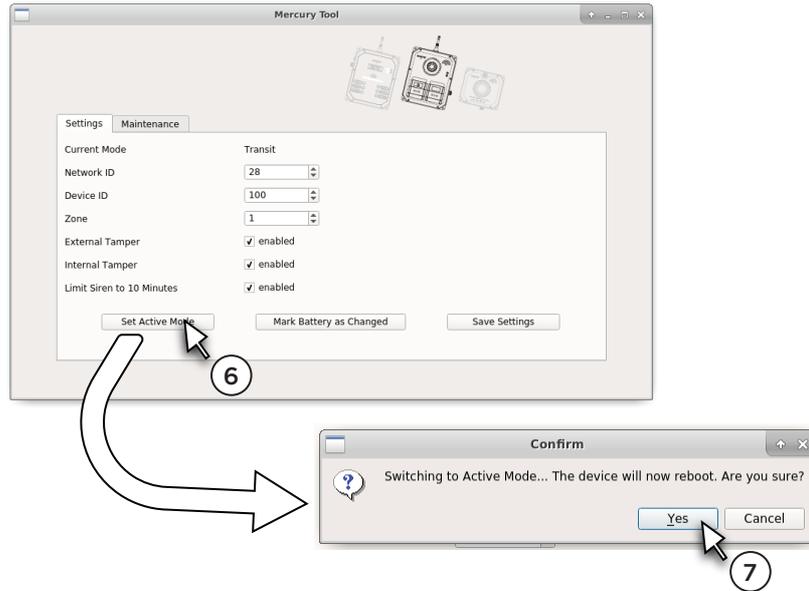
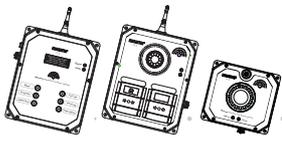
Each Call Point and Detector must be assigned to a network and be given a unique ID number within the network. Before shipping, each unit is placed into an ultra-low power “transit” mode, so it is also necessary to activate the unit before it can be used.

Instructions:

1. Connect the PC to the Elotec Confire Call Point or Detector using the USB Mini-B cable.
2. Run the Elotec Confire Tool.



3. Enter the “Network ID” (given by the Base Station), the “Device ID” (a unique number for the network) and a zone (if required – see “Zones”, page 20).
4. Click “Save Settings”.
5. At the confirm dialog, click “Yes”.

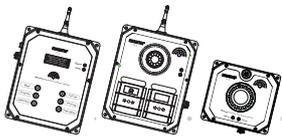


6. Click "Set Active Mode".
7. At the confirm dialog box, click "Yes";
The unit will restart;

The "Status" and "Fault" LED indicators will flash until the unit has joined the network.

For further configuration options, refer to *"Software Configuration (Call Point and Detector Only)"*, page 67.

CAUTION: Take care when setting the unit ID and Network. Setting the unit Network ID or device ID incorrectly may prevent the correct operation of the system or, possibly, cause interference with other systems.



2.4.2.1.2 Configuring the Base Station

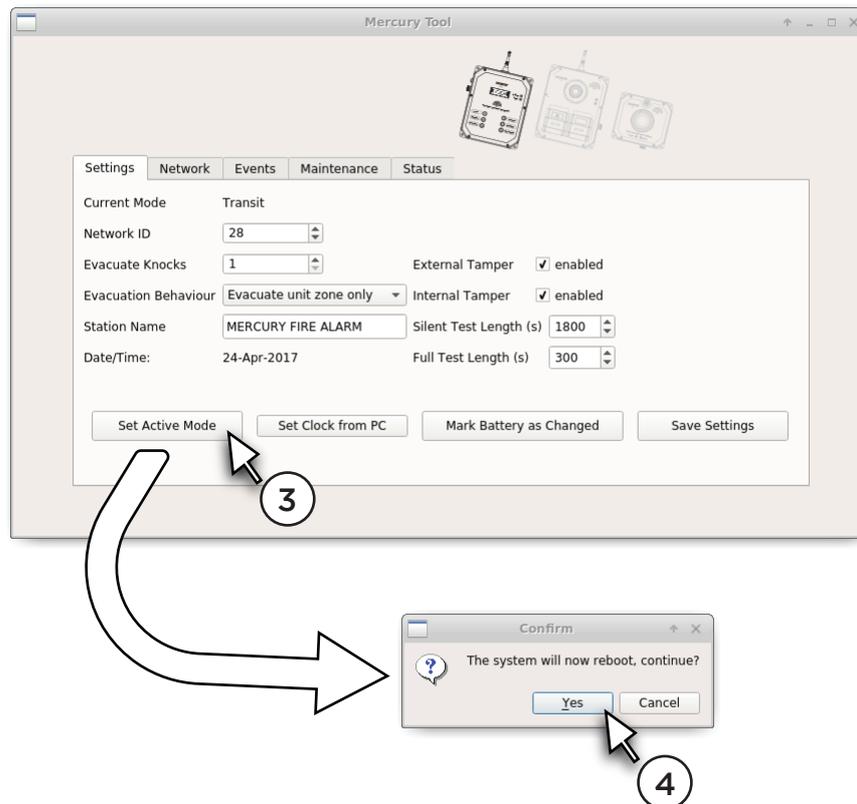
Each of the units must be added to the Base Station.

NOTE: If the Base Station is already active, steps 2 through 4 can be omitted.

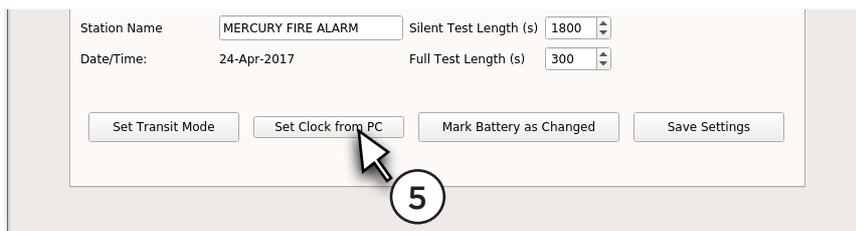
NOTE: To reduce the time taken to join the network, remote units to be added to the network should be placed into “transit” mode before they are added to the Base Station and returned to “active” mode once the configuration is complete.

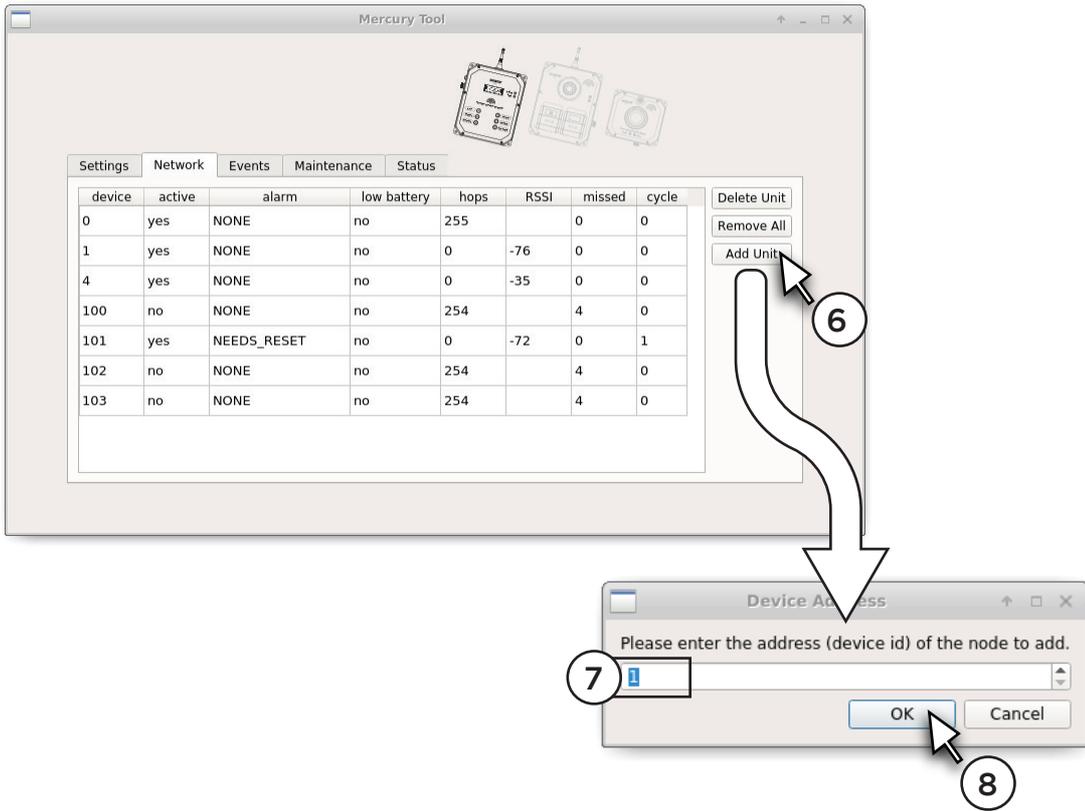
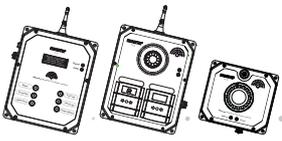
Instructions:

1. Connect the PC to the Elotec Confire Base Station using the USB Mini-B cable.
2. Run the Elotec Confire Tool.



3. In the “Settings” tab, click “Set Active Mode”.
4. At the confirm dialog box, click “Yes”.
The unit will restart
5. (Optional) If the local date/time in the Base Station is incorrect, click “Set Clock from PC” in the “Settings” tab.



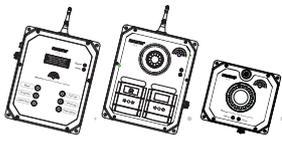


6. In the "Network" tab, click "Add Unit".
7. Enter the unit ID for the unit to be added.
8. Press "OK".

```
Your Site Name  
240 Units Online  
240 Units Total  
30-Mar-2017 12:00:00
```

9. Each of the connected units will now join the network. The number of connected units is displayed on the Base Station 4-line OLED display.

For further Base Station configuration options, refer to "Software Configuration (Base Station Only)" page 55.



2.4.2.2 Raising the Alarm

The Elotec Confire Fire Alarm is a Fire Detection and Alarm System. Its primary function is to protect personnel and property by detection of the presence of fire and by sounding the alarm.

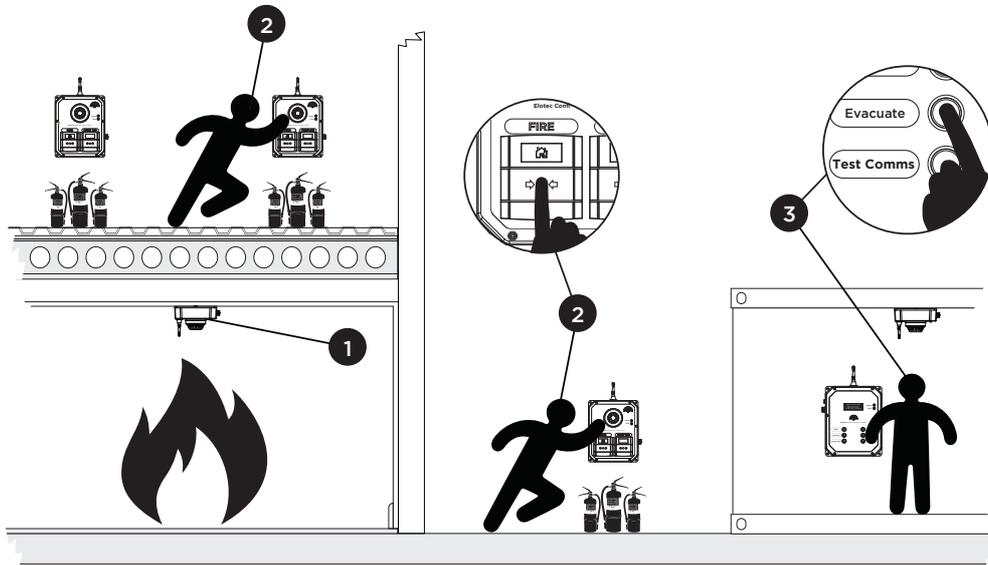


Figure 1 - Raising the Alarm

Confire allows the alarm to be raised by:

- 1 – Automatic detection of fire using heat or smoke detectors
- 2 – Manual detection of fire using Call Points
- 3 – Manual evacuation at the Base Station (e.g. in the site office)

Upon detection of a fire, Confire will sound an alarm at the triggered Call Point (if applicable) and an audible alert at the Base Station (e.g. in the site office) before automatically sounding the alarm at other Call Points in the system.

The system may be configured into Zones so that the alert can be sounded in specific areas (see Zones, page 20). The system may also be configured into “Double Knock” mode so that two Call Point triggers are required before the alarm is sounded.

NOTE: The double knock feature does not apply to smoke / heat detectors. The alarm will sound when a single detector is activated irrespective of the configuration of the Base Station or Detector.

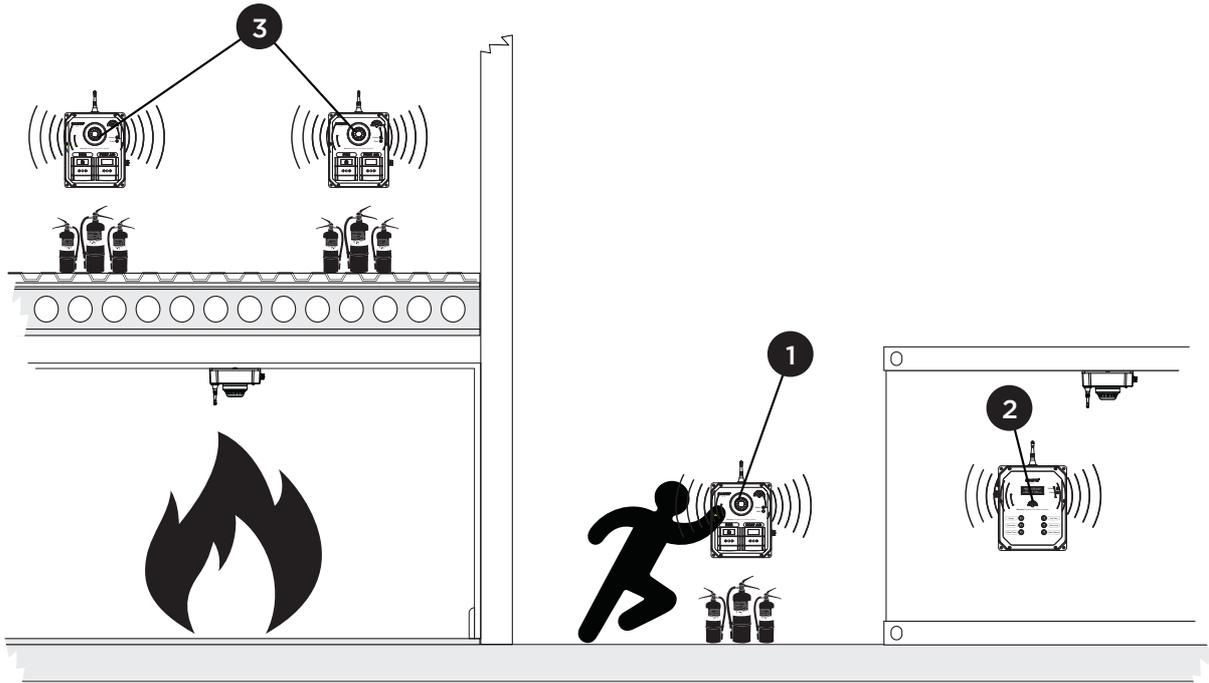
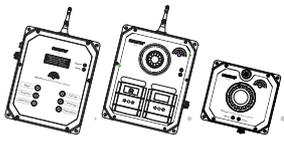


Figure 2 - Sounding the Alarm

1 – Sounder at the triggered Call Point

2 – Buzzer at the Base Station

3 – Alarm sounded at other Call Points

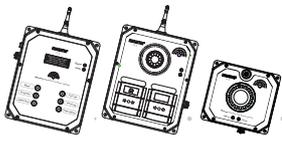
2.4.2.3 Silencing the Alarm

Following an alarm condition caused by a Call Point or Detector activation or by pressing the “Evacuate” button on the Base Station, the cause of the alarm must be inspected and the system reset.

Procedure:

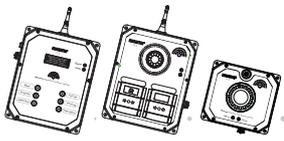
1. Press “Reset” for two (2) seconds at the Elotec Confire Base Station – the alarm will be silenced.
2. The Base Station will start a count down. Activated devices should be reset before the count down reaches zero otherwise they will not be used by the system until the system is reset again.





3. Manually inspect and reset any activated Call Points (see *"Resetting following alarm activation"*, page 39).
4. Manually inspect any activated Heat / Smoke Detectors (see *"Resetting following alarm activation"*, page 49).

If the inspection and reset procedure takes more than 30 seconds, the Base Station reset timer will expire. After the Call Point or Detector is reset, the "Reset" key can be pressed again.



2.4.2.4 Testing the Alarm

The Elotec Confire Fire Detection and Alarm System provides two means of testing the system.

Test Comms Test Comms will cause the “Status” indicator on all attached devices to be illuminated. Test

Comms indicates that the devices are powered and connected to the system and is not a substitute for test alarm.

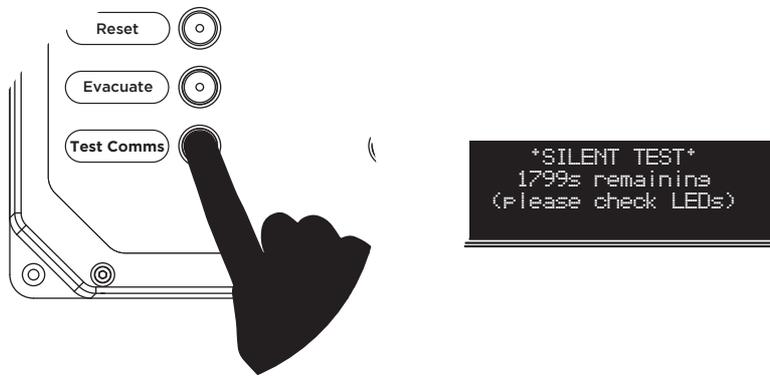
Test Alarm Test Alarm will cause the sounder and beacon in all Call Points to be enabled (intermittent pattern) to allow the sounders and beacons to be inspected.

2.4.2.4.1 Test Comms

Procedure:

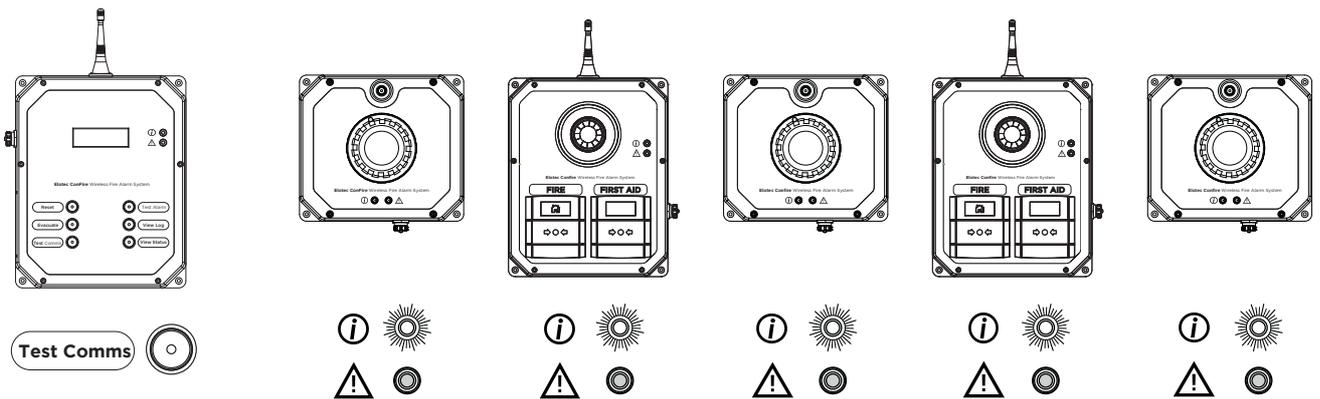
1. Press “Test Comms” for two (2) seconds at the Elotec Confire Base Station.

The green status LED in all connected Call Points, Smoke Detectors and Heat Detectors will be illuminated (continuous). The buzzer at the Base Station will sound.



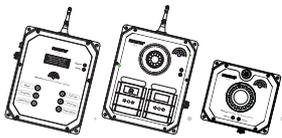
2. Inspect each Elotec Confire Call Point, Smoke Detector and Heat Detector in turn and ensure the green status LED is illuminated (continuous).

The comms test will expire after 1800 seconds by default and must be re-enabled if the inspection is incomplete. The timeout can be extended – see “Basic Settings”, page 58.



3. Press “Reset” for 2 seconds at the Elotec Confire Base Station. *The green status LED in all connected devices will be extinguished.*
4. The test is complete.

NOTE: Pressing “Reset” for 2 seconds at any time during the test will cancel the test.

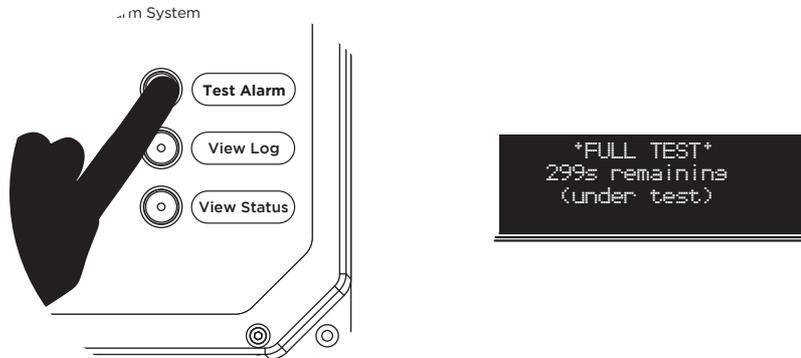


2.4.2.4.2 Test Alarm

Procedure:

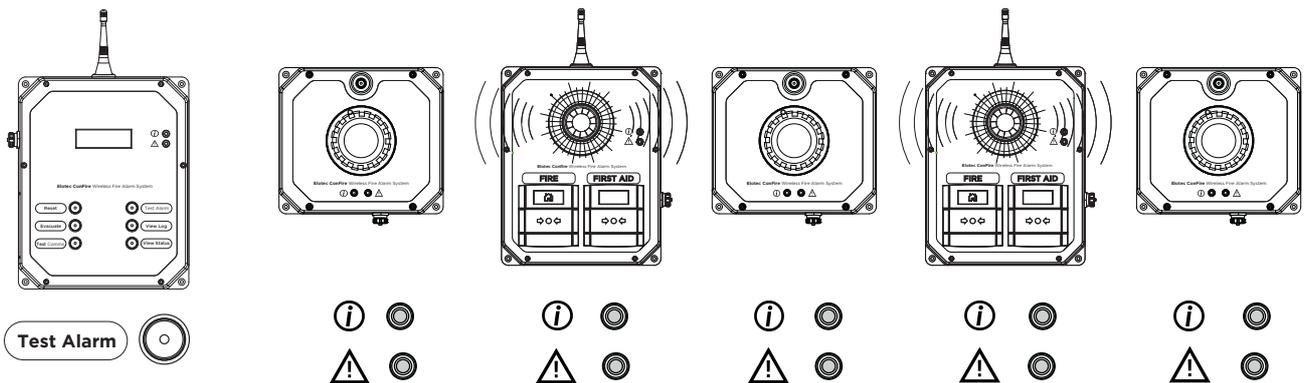
1. Press “Test Alarm” for two (2) seconds at the Elotec Confire Base Station.

The audible and visual test in all connected Call Points will begin (evacuate tone, intermittent). The buzzer at the Base Station will sound.



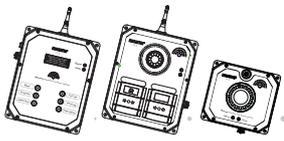
2. Inspect each Elotec Confire Call Point in turn and ensure the sounder and beacon are operating correctly.

The alarm test will expire after 300 seconds by default and must be re-enabled if the inspection is incomplete. The timeout can be extended – see “Basic Settings”, page 58.



3. Press “Reset” for two (2) seconds at the Elotec Confire Base Station. *The audible and visual test will cease.*
4. The test is complete.

NOTE: Pressing “Reset” for 2 seconds at any time during the test will silence the alarm.

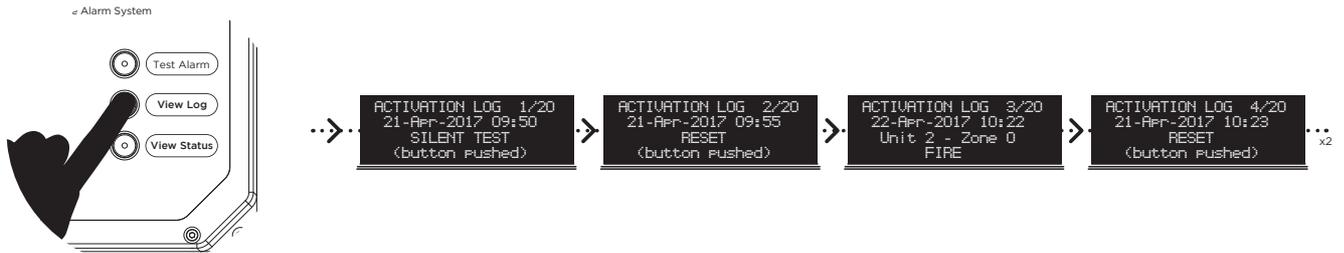


2.4.2.5 Event Logging

The system will store the last twenty (20) events in its internal memory. These can be viewed by pressing the “View Log” button. Events include alarm activations and fault conditions.

NOTE: In order to use the logging feature, the time and date must be set correctly using the configuration tool – see Basic Settings, page 58. **CAUTION!** Failure to set the time and date may result in unexpected event logging behaviour!

1. Press “View Log” at the Elotec Confire Base Station.
The display will show the events stored in the system.



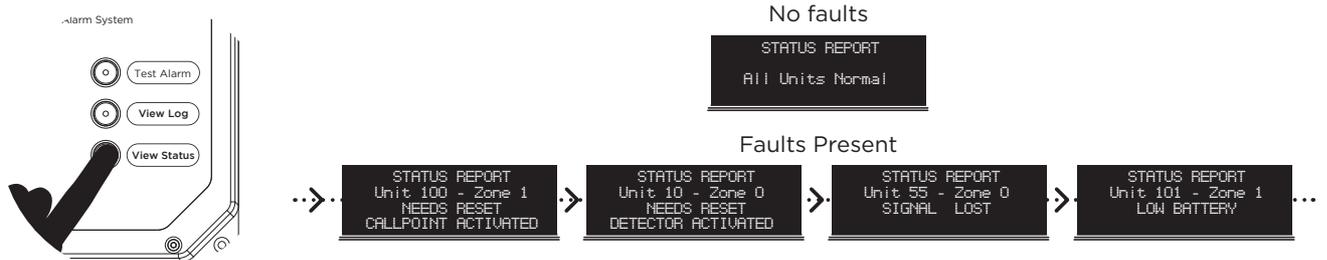
2. The log report is complete.

NOTE: Only the most recent 20 events are stored. The oldest event will be cleared from memory for each new event stored.

2.4.2.6 System Status

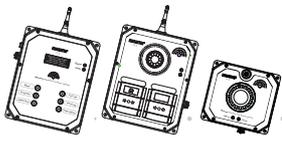
The status of the devices connected to the system can be viewed at the Base Station by pressing the “View Status” button.

1. Press “View Status” at the Elotec Confire Base Station.
The display will show “All Units Normal” or will cycle through any faults where present in the system;



2. The status report is complete.

NOTE: The system will periodically display the status page as part of its normal operation, the status button is provided as a convenience.



2.4.3 Principle of Operation

2.4.3.1 Placement of Confire Units

Elotec state a nominal radio range of one (1) kilometre in free space – however this range is highly dependent upon site conditions such as the weather and objects placed between the transmitter and the receiver such as buildings, temporary structures, terrain and trees. Radio signals may also be affected by reflections caused by metallic structures or interference from other systems operating in the same frequency range such as radio links.

Elotec Confire units communicate in both directions and, therefore, act as both transmitter and receiver. The radio path loss may be asymmetric – i.e. the transmit and receive path may be unequally affected by the environment.

It is, therefore, difficult to estimate the performance of devices in the network accurately before they are installed in the environment.

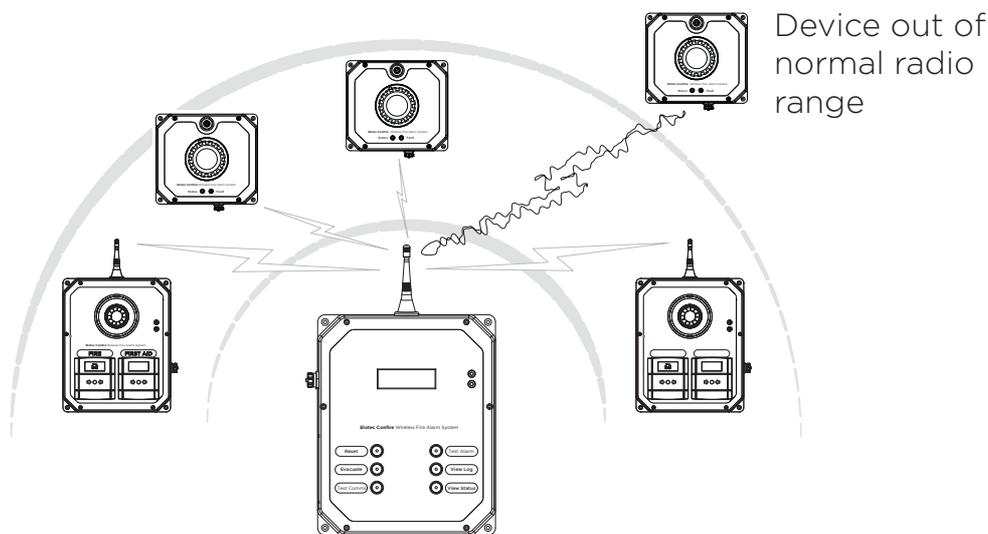


Figure 3 - establishing device range

In order improve signal transmission, the Confire range will automatically:

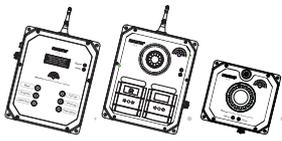
Establish a “mesh” network – Confire devices automatically creates a mesh network between units that allow messages that cannot reach the Base Station directly to be passed through other units where possible.

Use alternative frequencies – Confire devices automatically “hop” between different frequencies to reduce the impact of momentary interference from 3rd party devices operating in the same frequency range.

In the event that reliable communication between units and the Base Station cannot be achieved, the installer can:

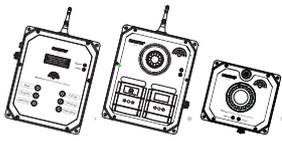
Move Devices – Confire units can be re-deployed to remedy transmission problems with specific units. As units are moved, the mesh network will automatically adapt to the new conditions.

Add Devices – Adding more Confire units can improve transmission to/from existing units. Adding another unit (Call Point or Detector) into the mesh network creates additional possible routes through which, messages can be passed.



NOTE: After moving a unit, ALWAYS perform a Comms Test (see “Test Comms”, page 15) to confirm that the unit is connected to the network and confirm that the Base Station does not report any faults. It should be noted that, because of the mesh network, moving a unit to improve the communication to/from one unit may have the opposite effect for another unit in the network.

Further guidance on how to determine the performance of the radio network is given in “Placement of Confire Units” page 18. In case of difficulties achieving acceptable network coverage and/or range, please contact Elotec.



2.4.3.2 Zones

The Elotec Confire Fire Detection and Alarm System (FDAS) provides eight (8) zones (0 to 7). Detectors and Call Points may be assigned to a zone during the configuration step.

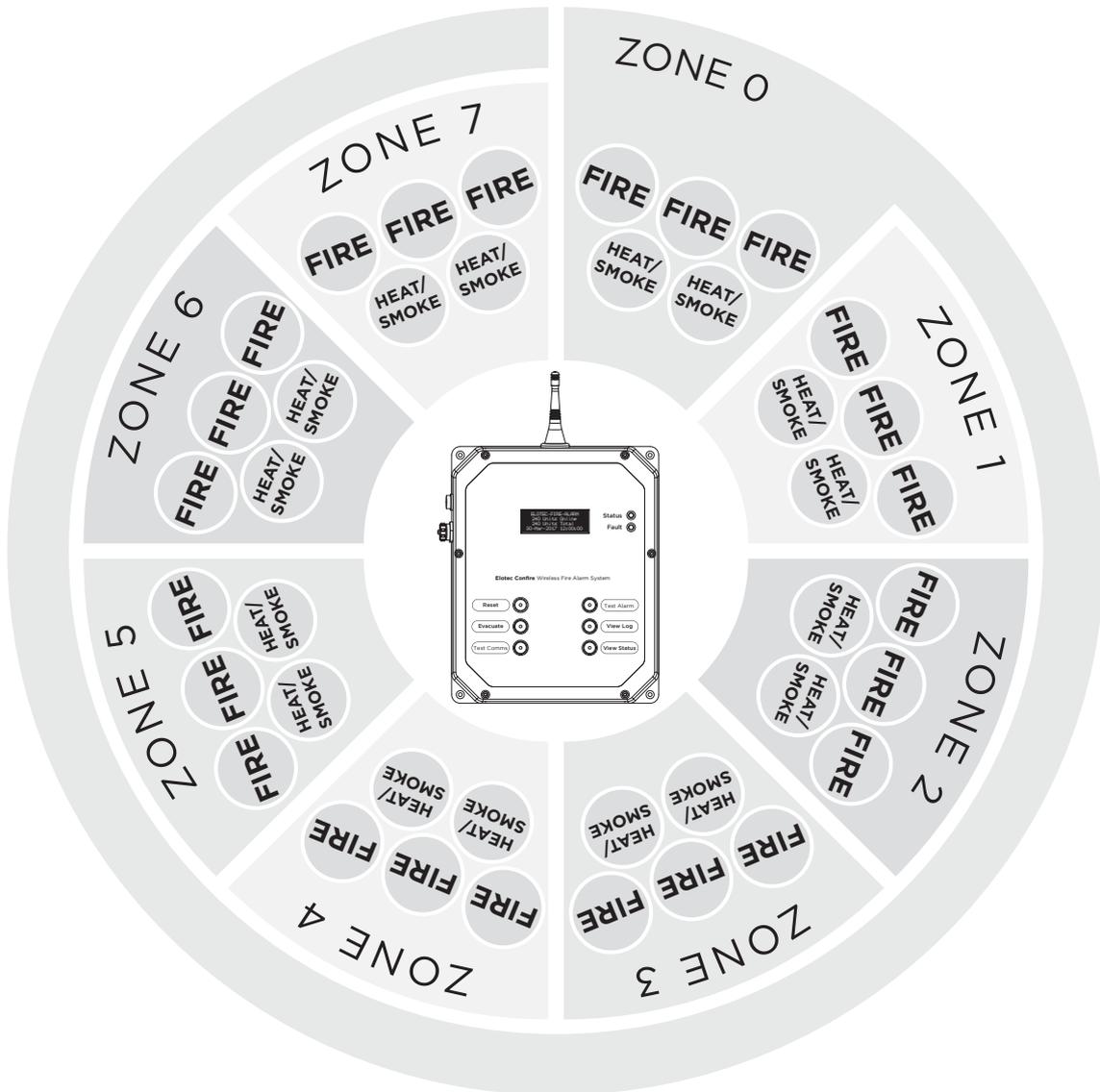
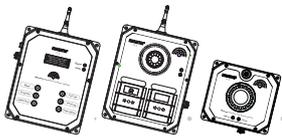


Figure 4 - Zone Configuration

Zone 0 – Special Zone. If an alarm is generated by a Detector or Call Point in zone 0, it will trigger an evacuation of all zones triggering an audible and visual alarm at all Call Points in the network.

Zone 1-7 – Normal zones. An alarm generated in this zone will trigger an audible and visual alarm in all Call Points within the zone. An audible and visual alarm will also be triggered in zone 0.



Behaviour of the system will depend on the configuration of the Base Station:

Single Knock – Activation of one (1) or more Fire Call Point will trigger evacuation in its zone and in zone 0. All smoke and heat detectors behave as single knock.



Double Knock – Activation of two (2) or more Fire Call Points in the same zone will trigger evacuation in the zone and in zone 0. Activation of one (1) or more Fire Call Points in two (2) or more different zones will trigger evacuation in all zones.

Evacuate All Zones – An evacuation triggered in one zone will trigger evacuation in all zones.

Evacuate Unit Zone Only – An evacuation triggered in zone 0 will trigger an evacuation in all zones. An evacuation triggered in zone 1 – 7 will trigger an evacuation in that zone and zone 0 unless more than one zone is evacuated, then all zones are evacuated.

For example:

Heat / Smoke Detectors

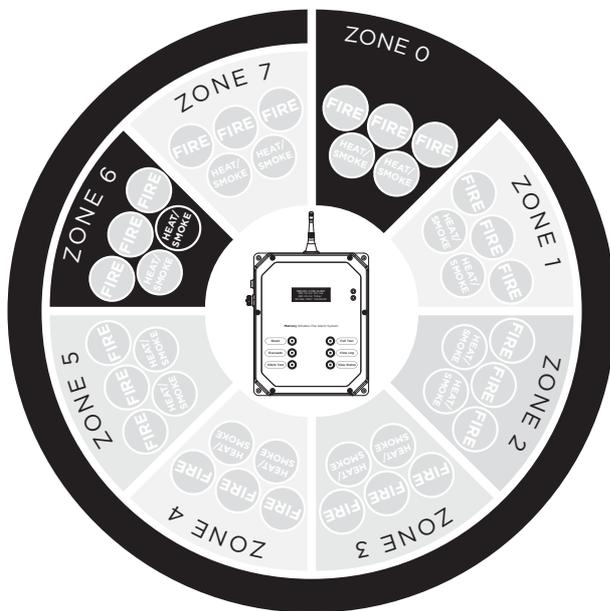


Figure 5 – “Evacuate Unit Zone Only”

Base Station Evacuate Unit Zone Only
Event Detector in zone 6
Result: Zone 6 and zone 0 are Evacuated

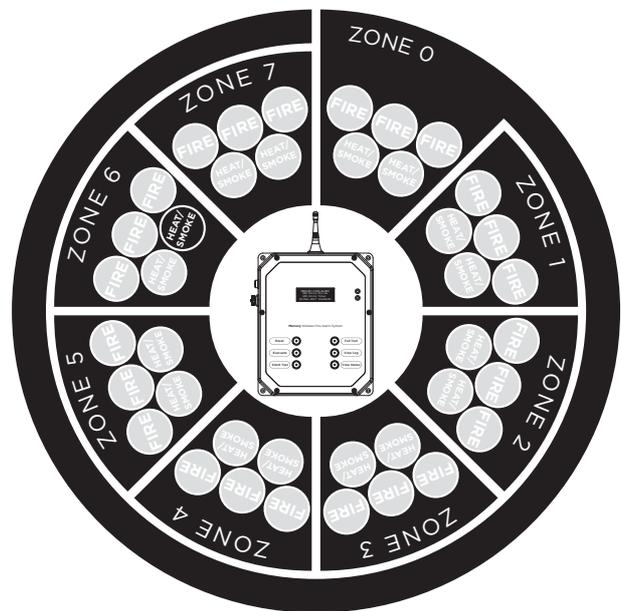
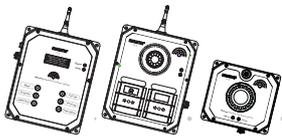


Figure 6 – “Evacuate All Zones”

Base Station Evacuate All Zones
Event Detector in zone 6
Result: All zones are Evacuated



Fire Call Points (Single Knock):

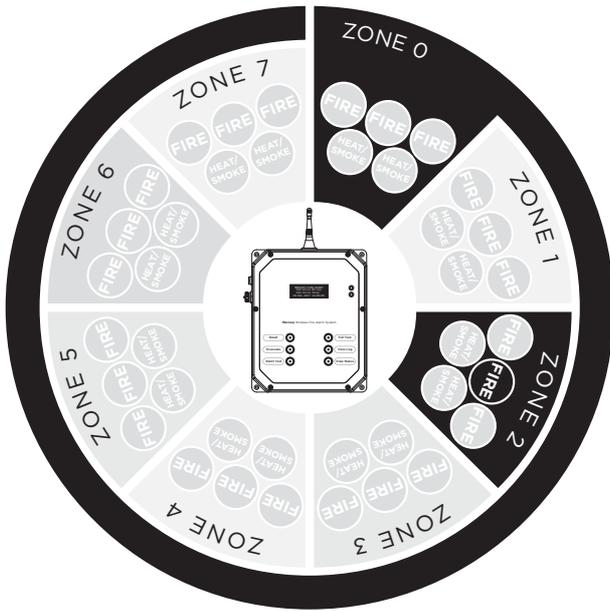


Figure 7 – “Evacuate Unit Zone Only”

Base Station Evacuate Unit Zone Only
Event Fire Call Point in Zone 2
Result: Zone 0 and Zone 2 are Evacuated

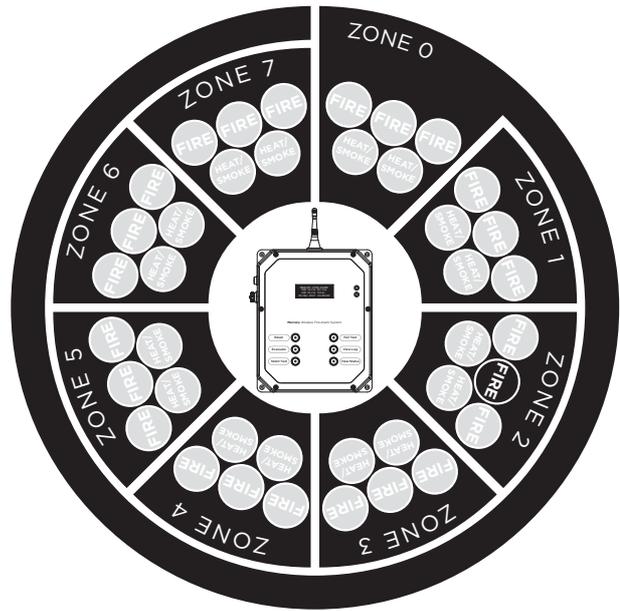


Figure 8 – “Evacuate All Zones”

Base Station Evacuate All Zones
Event Fire Call Point in Zone 2
Result: All Zones are Evacuated

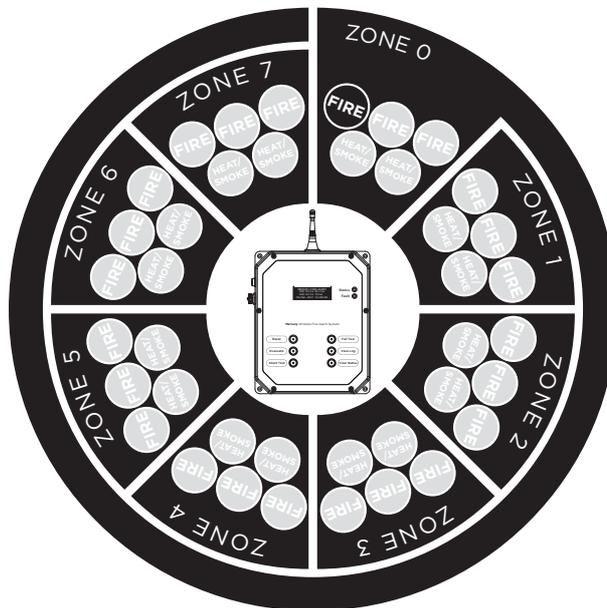
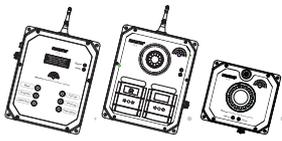


Figure 9 – Fire Call Point in Zone 0

Base Station Evacuate Unit Zone Only
Event Fire Call Point in Zone 2
Result: All Zones are Evacuated



Fire Call Points (Double Knock):

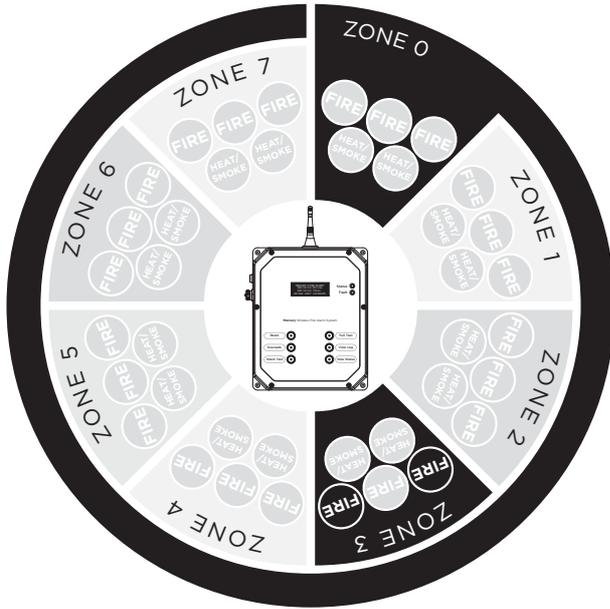


Figure 10 – Double Knock “Evacuate Unit Zone Only”

Base Station Evacuate Unit Zone Only
Event 2 x Fire Call Point in Zone 3
Result: Zone 0 and Zone 3 are Evacuated

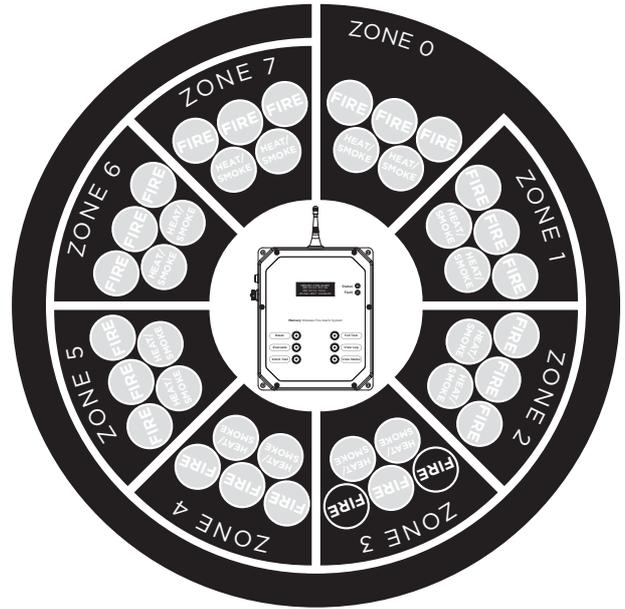


Figure 11 – Double Knock “Evacuate All Zones”

Base Station Evacuate All Zones
Event 2 x Fire Call Point in Zone 3
Result: All Zones are Evacuated

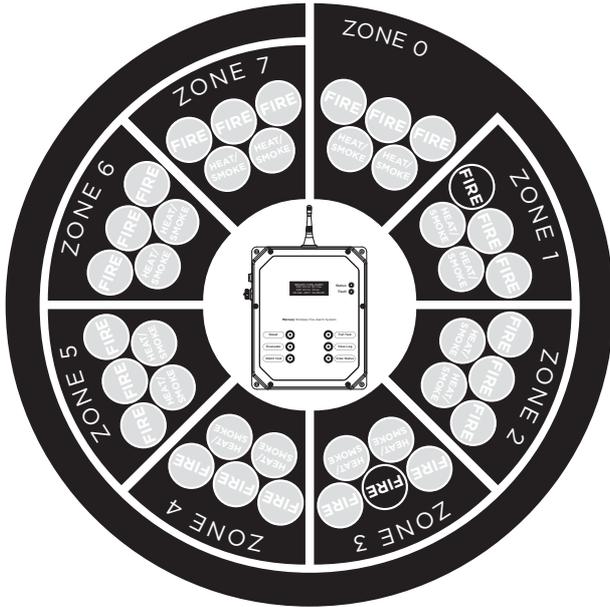
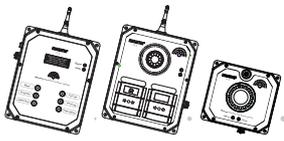


Figure 12 – Double Knock Different Zones

Base Station Evacuate Unit Zone Only
Event Fire Call Point in Zone 1 and 3
Result: All Zones are Evacuated

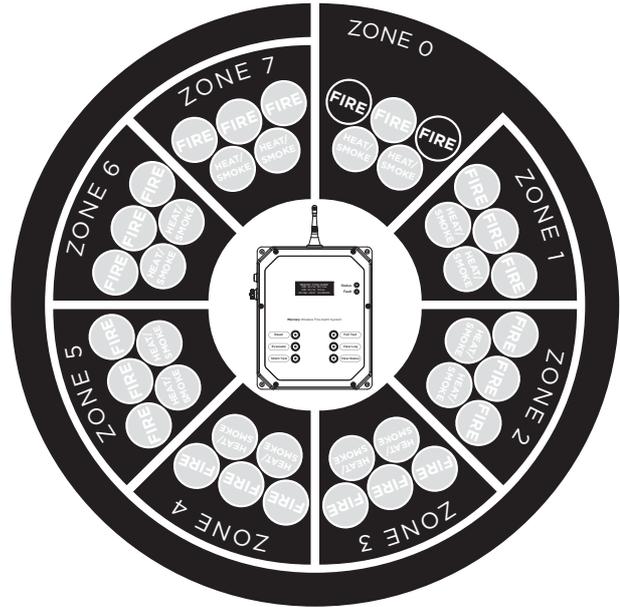
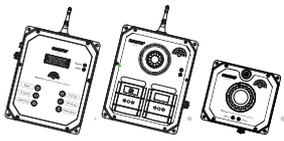


Figure 13 – Double Knock Zone 0

Base Station Evacuate Unit Zone Only
Event 2 x Fire Call Point in Zone 0
Result: All Zones are Evacuated



NON-EN 54: The double knock feature is not compliant with EN 54. Use of the double knock feature is at the discretion of the user.



3 Elotec Confire Base Station

3.1 Base Station Features

The Elotec Confire Base Station provides fault Δ and status i indication for all units connected to the network. It also provides the ability to perform system testing and to evacuate the site.

The features and indicators of the Elotec Confire Base Station are shown in the figure below.

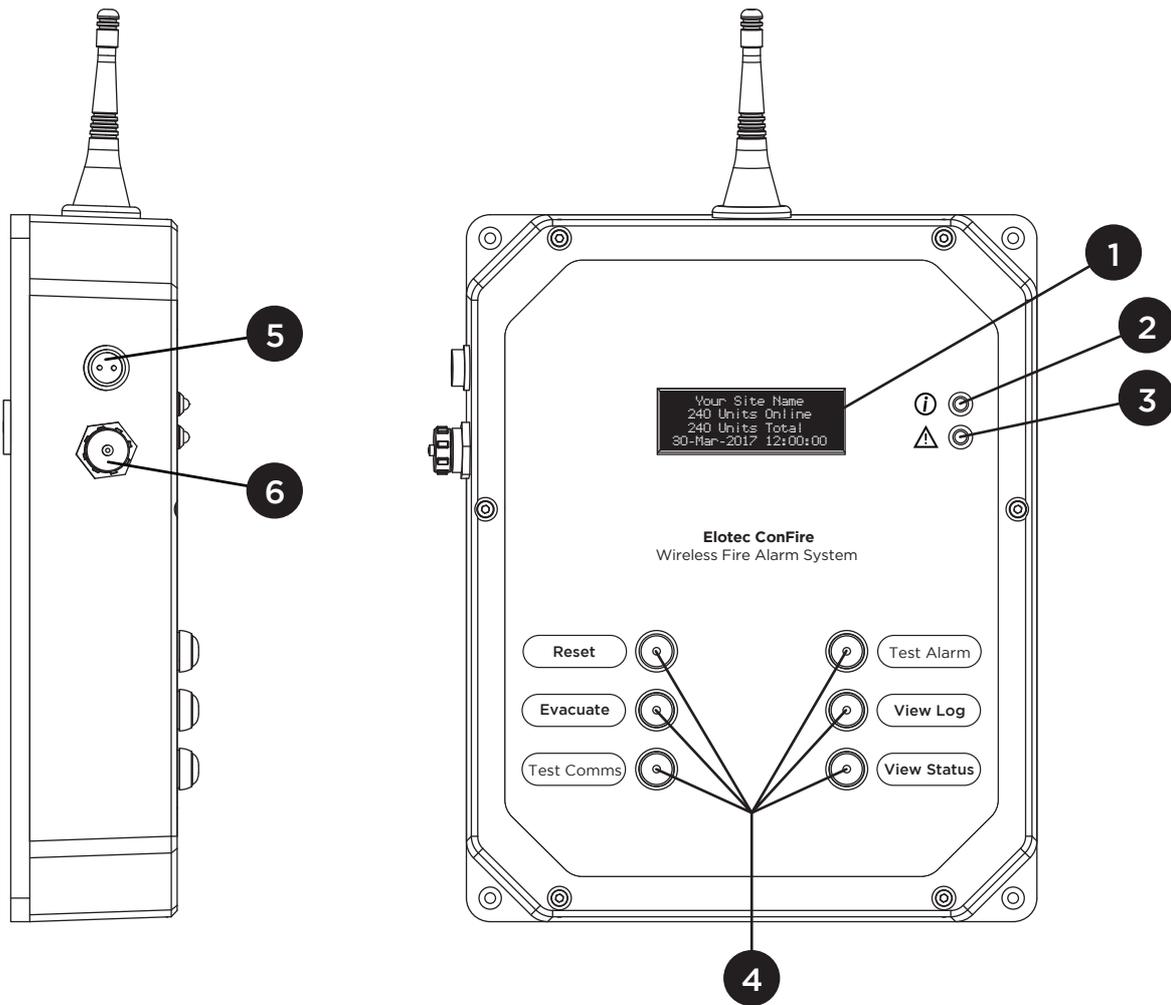


Figure 14 – Base Station Features (Front and Side)

- | | |
|----------------------------------|---|
| 1 – OLED 4-line display | 4 – Control Buttons |
| 2 – Status LED indicator (green) | 5 – DC Power Supply Inlet * |
| 3 – Fault LED indicator (red) | 6 – USB Configuration Port and dust cap |

* To ensure that the Elotec Confire Alarm System complies fully with the requirements of EN54 (specifically EN54-25:2008, section 5.3.1), the Elotec Confire Base Station must be powered by a 12V, EN54-4 compliant power supply. Contact Elotec for an appropriate unit.



The base station comes as standard with a non-compliant switch mode power supply, part number CONF-TRF. The product has been fully tested when powered by this supply, but the use of this supply means that your installation will not comply with the requirements of section 5.3.1 of EN54-25:2008.

The control buttons provide the following functions:

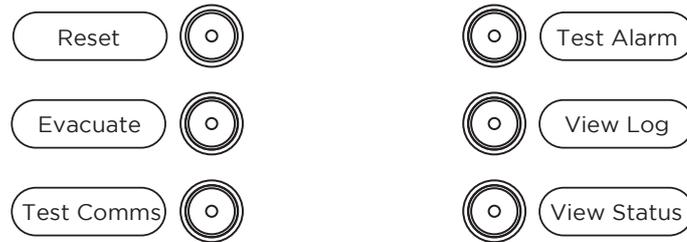


Figure 15 –Panel Controls

Reset – Press and hold for two (2) seconds to reset the system alarm, test or evacuate state.

Evacuate – Press and hold for two (2) seconds to activate all Call Point beacons and sounders (continuous).

Test Comms* – Press and hold for two (2) seconds to enable the comms test. The Status LED on all connected Confire units will be illuminated for inspection.

Test Alarm* – Press and hold for two (2) seconds to initiate a full (audible) test of the system. Call point sounders and beacons will be activated (intermittent).

View Log* – Press to show the last twenty (20) recorded events on the OLED display.

View Status* – Press to show the status of the system. Where warnings are present, the Base Station will scroll through the warnings.

* this feature is not available during an alarm or evacuation state.

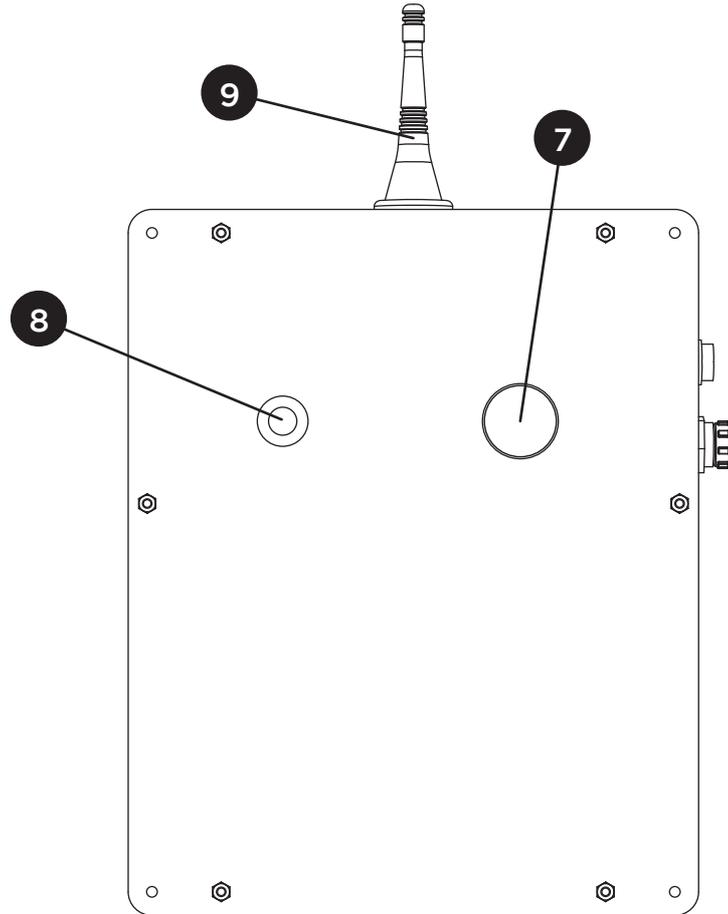
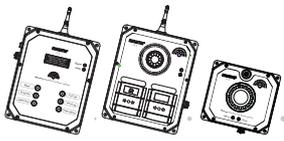


Figure 16 – Call Point Features (Rear)

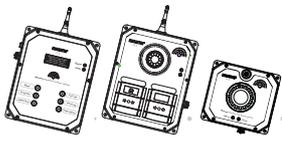
7 – Rear Tamper Switch *

8 – Foam tamper switch depressor

9 – Radio antenna

NOTE: * the foam tamper depressor is fitted to the rear tamper switch (7) to ensure that the tamper operates effectively. Replacements can be obtained from Elotec.

CAUTION: DO NOT CARRY THE BASE STATION BY THE ANTENNA. Damage to antenna may cause malfunction of the Base Station and/or reduction in its operating range.



3.2 Base Station Installation

The Elotec Confire Base Station is designed for indoor use only.

3.2.1 Mounting

The Elotec Confire Base Station must be screwed securely to a flat surface. It is intended for vertical installation onto a wall. The Elotec Confire Base Station should be installed close to a mains supply for the external power supply. Four (4) mounting holes are provided as shown below:

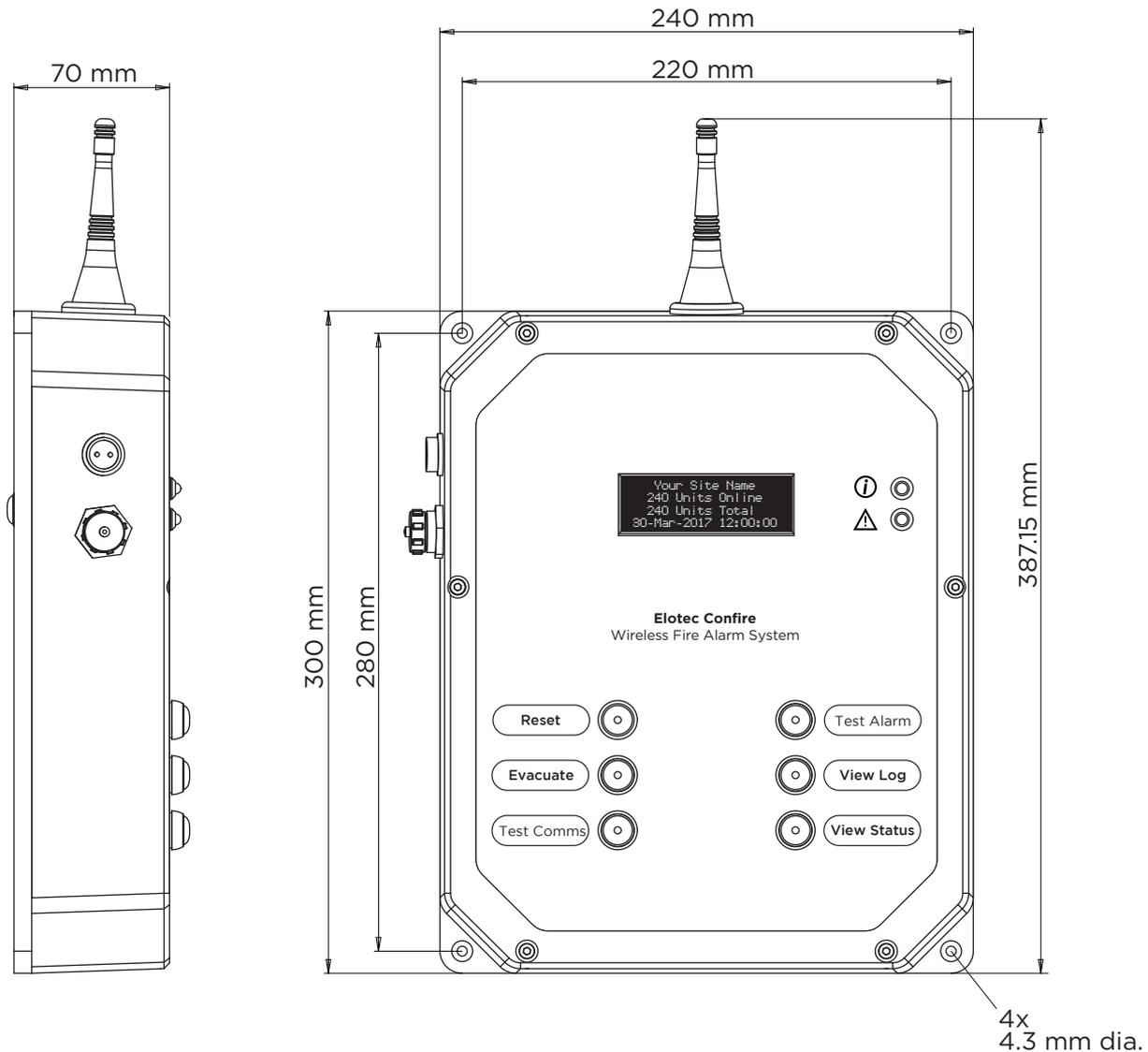
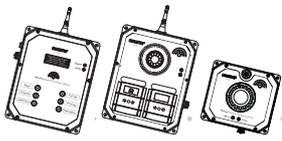


Figure 17 - Mounting and Dimensions

CAUTION: ENSURE BASE STATION IS SECURELY MOUNTED TO FLAT SURFACE. In order to prevent false tamper alarms, the mounting surface must be rigid and flat.



3.2.2 Radio Range

The Elotec Confire Base Station must be placed in a position within radio range of the Elotec Confire Call Points and Detectors. See "Placement of Confire Units", page 18 for details.

3.2.3 Setting to work

The Elotec Confire Base Station is usually configured at the factory and delivered in "Transit Mode". To set the Base Station to work, or to change the configuration (e.g. to add or remove units), refer to "Software Configuration (Base Station Only)", page 55.

3.2.4 Testing

3.2.4.1 Test Comms

Test Comms is used to verify that all units are connected to the Base Station. When the "Test Comms" button is pressed on the Elotec Confire Base Station, the Status  LED indicator will illuminate on all connected units allowing them to be visually inspected. Refer to "Test Comms", page 15 for more details.

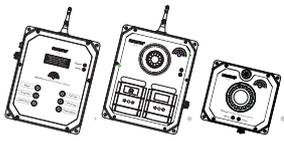
3.2.4.2 Audible and Visual (Full) Test

The "Test Alarm" is used to verify that the Call Point sounders and beacons are functioning correctly. When the "Test Alarm" button is pressed on the Elotec Confire Base Station, sounders at the Call Point and the Base Station will sound intermittently.

Refer to "Test Alarm", page 16 for more details.

3.2.5 Resetting following alarm activation

After an alarm activation from the Elotec Confire Call Point, Smoke Detector or Heat Detector, both the activated unit and the Base Station must be reset. Refer to "Silencing the Alarm", page 13 for more details.



3.3 Indicators

LED indicators are provided on the Elotec Confire Base Station body (2 – Green Status, 3 – Red Fault).

The 4-line OLED display changes according to the state of the system and user commands at the Base Station.

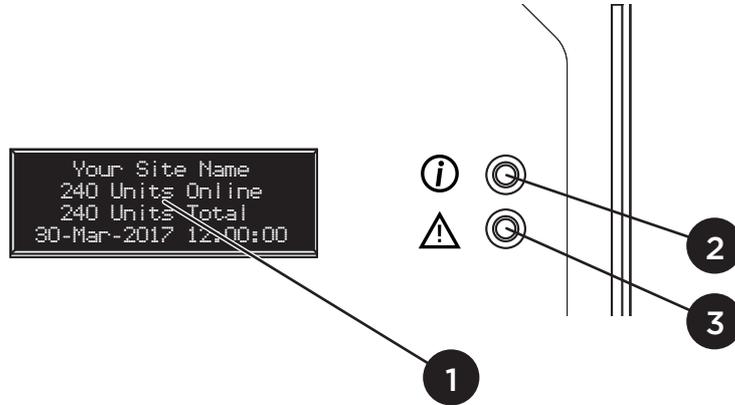
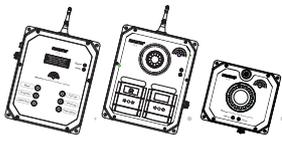


Figure 18 – Base Station Indicators

1 – OLED 4-line display

2 – Status  LED indicator (green)

3 – Fault  LED indicator (red)



3.4 OLED 4-line display

The OLED 4-line display gives status and fault indication to the user. The content of the display will depend upon the state of the system.

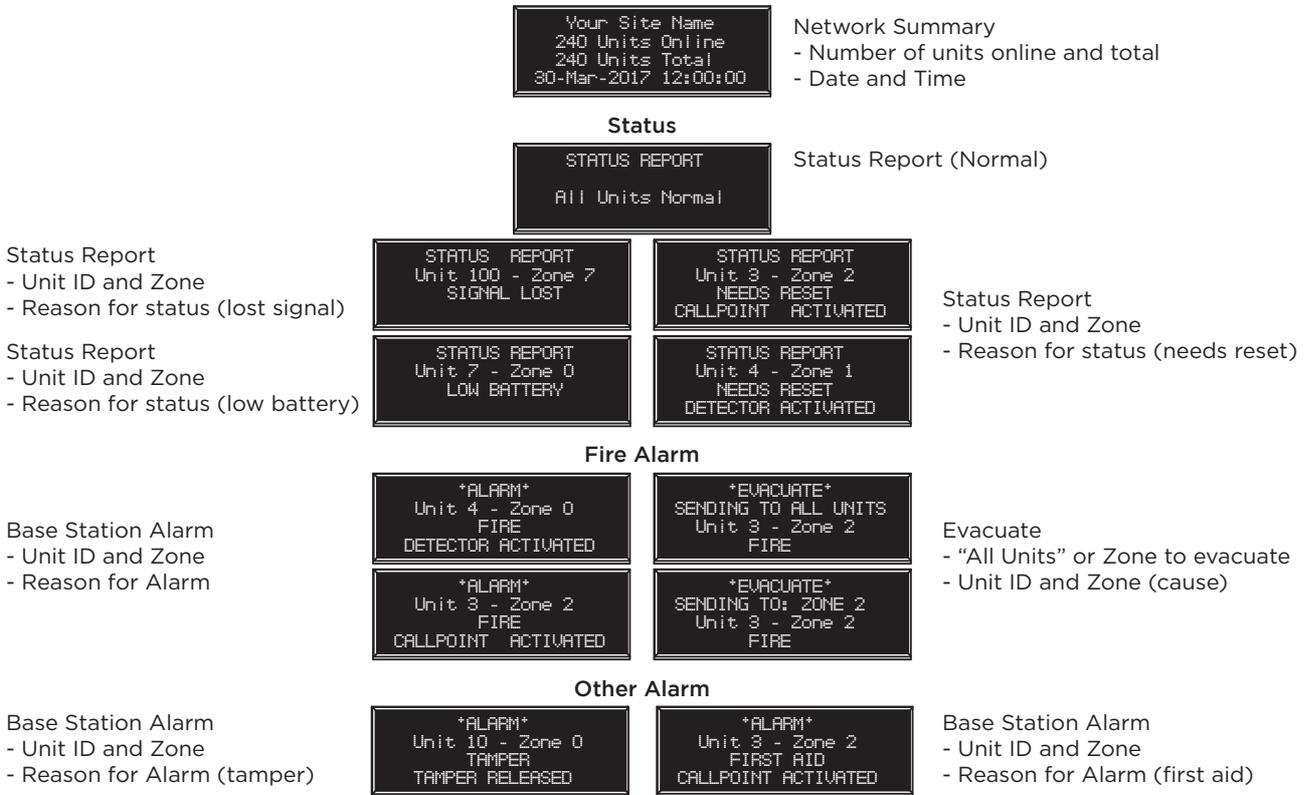


Figure 19 – OLED 4-line display messages

Network Summary – the network summary screen displays:

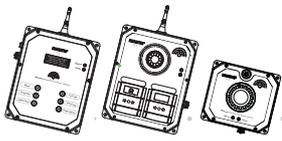
- the name of the network
- number of devices online
- total number of units
- date and time

Status Report – the status report display details system warnings such as low battery or that a Call Point or detector needs to be reset following an activation.

Alarm – the alarm display details fire Call Point activation, first aid Call Point activation, or tamper activation. The display will detail the ID and the Zone of the unit causing the alarm, along with a description of the cause of the alarm. Alarms are accompanied by an audible alert at the Base Station.

Evacuate – the evacuate display indicates that the evacuate alarm is active. The display will detail which zones are affected and the ID and Zone of the unit causing the evacuation. Evacuation is accompanied by an audible alert at the Base Station and an audible and visual alert at affected Call Points.

Note that the most significant event (Evacuate) will take priority over the least significant (Status).



3.5 Audible and Visual Alerts

In addition to the OLED 4-line display, the Elotec Confire Base Station is fitted with Status (green) and Fault (red) LEDs and a buzzer. Buzzer and LED behaviour is given in the figure below:

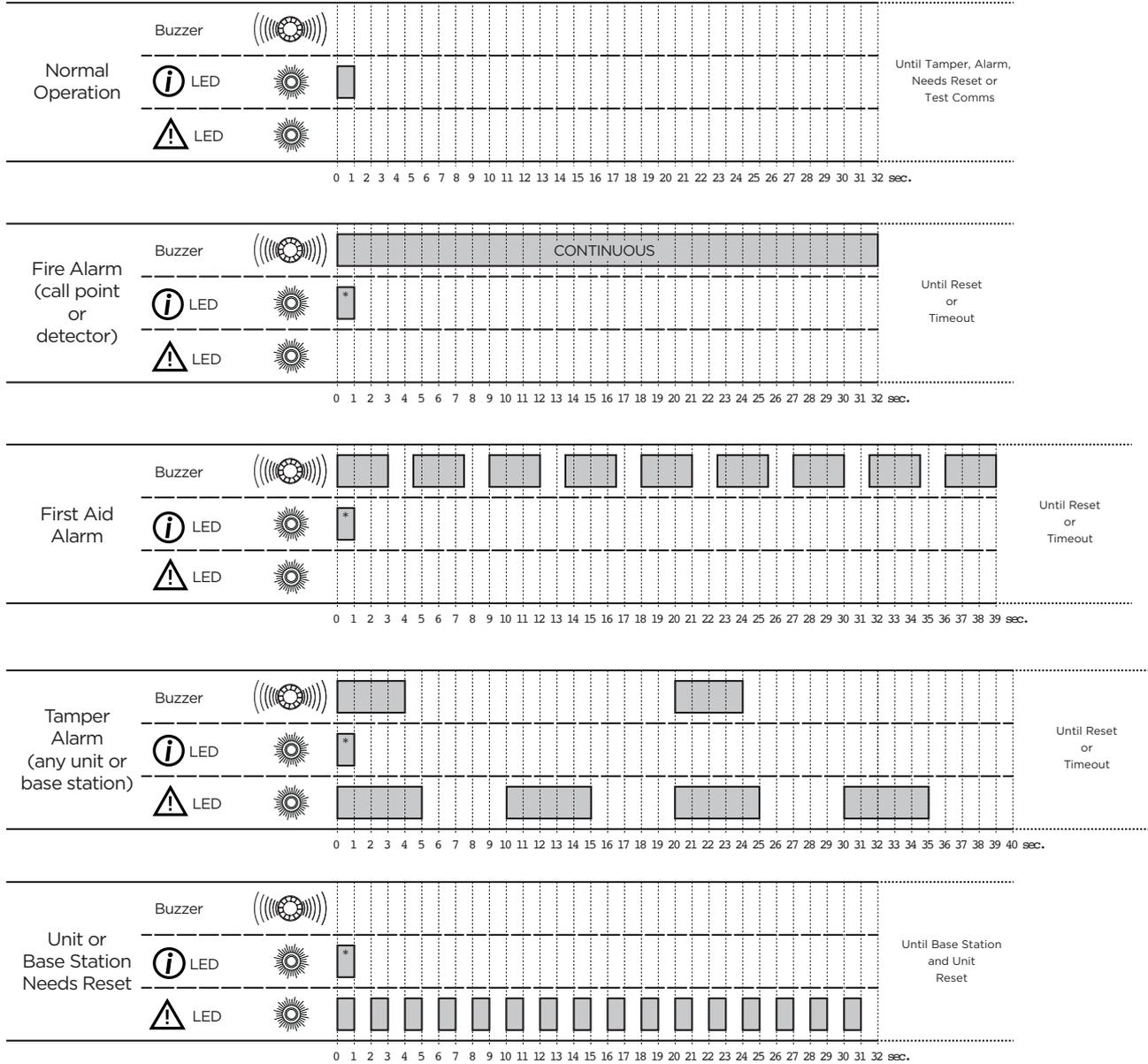
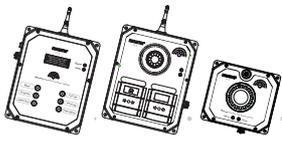


Figure 20 - Meaning of Base Station LED and Buzzer

*The Status (i) LED indicates the sending of a sync message by the Base Station to other units on the network. Transmission of the sync message occurs every 32 seconds, but is not necessarily coincident with the buzzer or Fault LED (!) as shown in this diagram.

Note that the most significant event (Fire Alarm) will take priority over other events.



3.6 Replacing the Battery

The internal batteries of the Elotec Confire Base Station are designed to power the device when the mains power supply is not available. The batteries are not rechargeable and should be replaced when they are flat. A low battery warning is displayed at the Base Station to indicate that replacement is needed.

NOTE: The low battery warning is not displayed when the batteries connected.

You will need:

1. Allen key 3mm A/F.
2. Three battery packs (Elotec Part No. CONF-BAT).
3. PC running the Elotec Configuration Tool.
4. USB-A to USB Mini-B cable.

To replace the battery:

1. Set the Base Station into "Transit" mode – see "Setting Transit Mode", page 57.
2. Unscrew the Base Station casing.

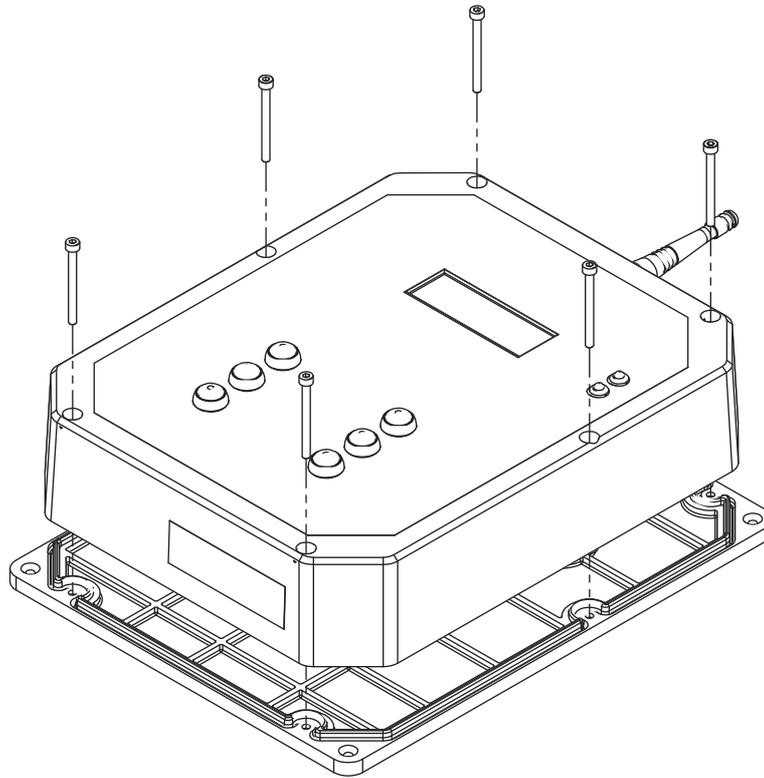


Figure 21 – Base Station Cover Removal

3. Replace all three (3) battery packs with Elotec part no. CONF-BAT.

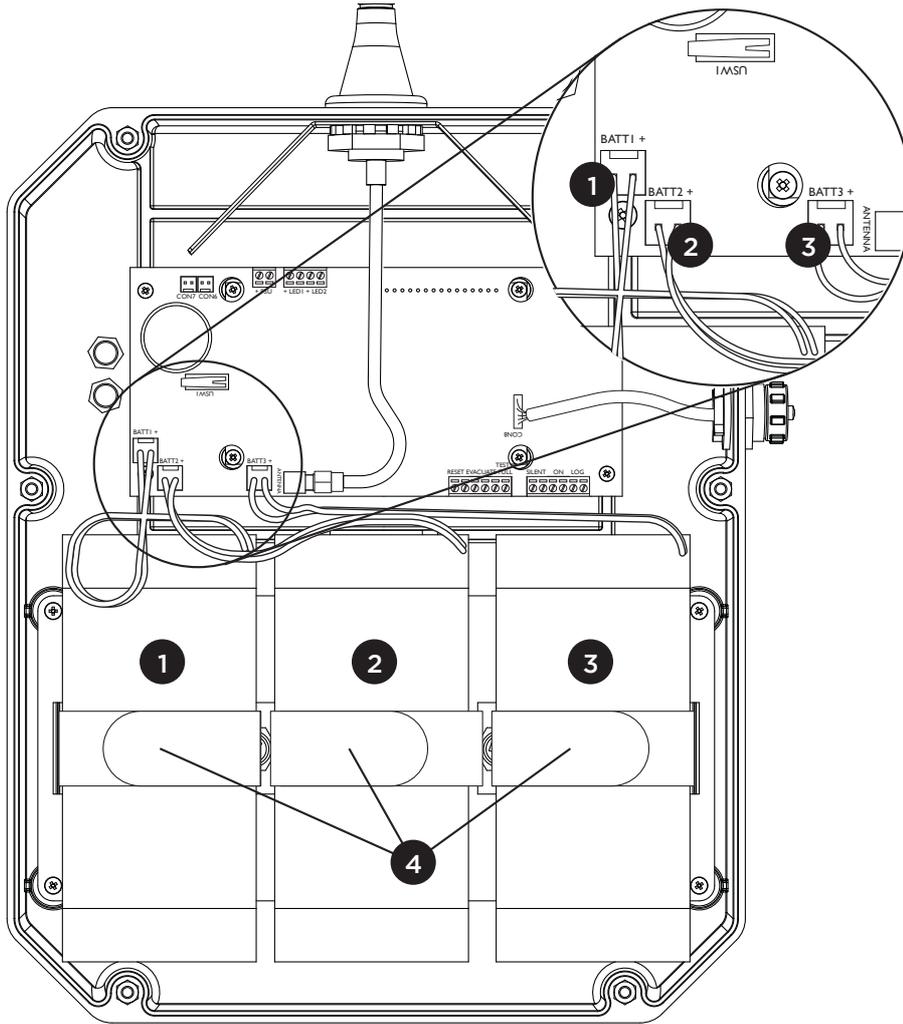
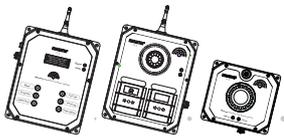


Figure 22 - Battery Pack location and identification

1 – Battery “BATT1” 2 – Battery “BATT2” 3 – Battery “BATT3” 4 – Hook and loop straps

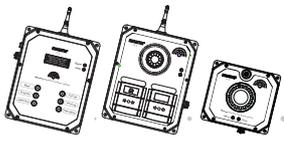
4. Replace the Call Point casing
N.B. Ensure that the flexible gasket is fully seated into the groove around the base.
5. Set the unit into “Active” mode – see “Setting Active Mode”, page 56.
6. Set the battery installation date using the software configuration tool (see “Basic Settings”, page 58 details)

WARNING: DO NOT RECHARGE BATTERY PACKS. The battery packs are not rechargeable. Attempts to recharge the battery pack may result in fire, explosion or injury to personnel.

CAUTION: DO NOT REVERSE POLARITY. The battery pack connectors are mechanically protected against reverse polarity. Attempts to force the connector into any other position may result in damage to the device and the battery.

CAUTION: ONLY REPLACE BATTERY PACKS WITH ELOTEC PART No. CONF-BAT. Use of third party battery packs may cause malfunction or reduction in the devices operating life.

CAUTION: ALWAYS REPLACE ALL BATTERY PACKS. Replacing one or two battery packs may cause malfunction or reduction in the devices operating life.



4 Elotec Confire Call Point

4.1 Features

The Elotec Confire Call Point provides a Fire and First Aid Call Point, audible sounder, and multi-tone LED beacon. The audible siren loudness can be configured for indoor and outdoor use. The features and indicators of the Elotec Confire Call Point are shown in the figure below.

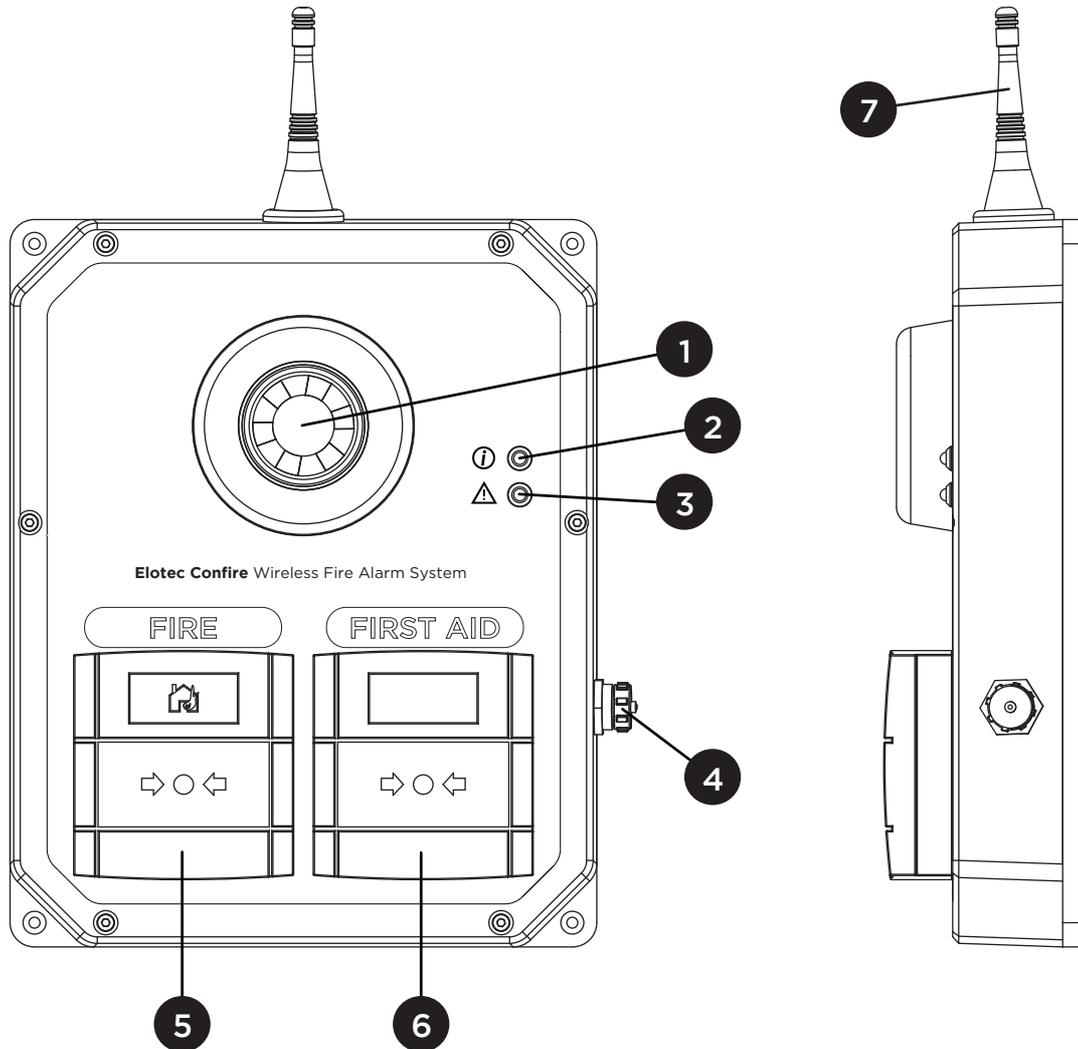


Figure 23 – Call Point Features (Front and Side)

- | | |
|---|---|
| 1 – Combined Beacon and Sounder | 5 – Fire Alarm Manual Call Point (red) |
| 2 – ① Status LED indicator (green) | 6 – First Aid Manual Call Point (green) |
| 3 – ⚠ Fault LED indicator (red) | 7 – Radio Antenna |
| 4 – USB configuration port and dust cap | |



Upon activation of the First Aid manual Call Point, the audible sounder will sound (buzzer tone) and the **i** Status LED will flash. Upon activation of the Fire manual Call Point, the audible siren will sound (sweep tone) and the beacon will flash. Note that, in the case of activation of both First Aid and Fire manual Call Points, Fire takes priority.

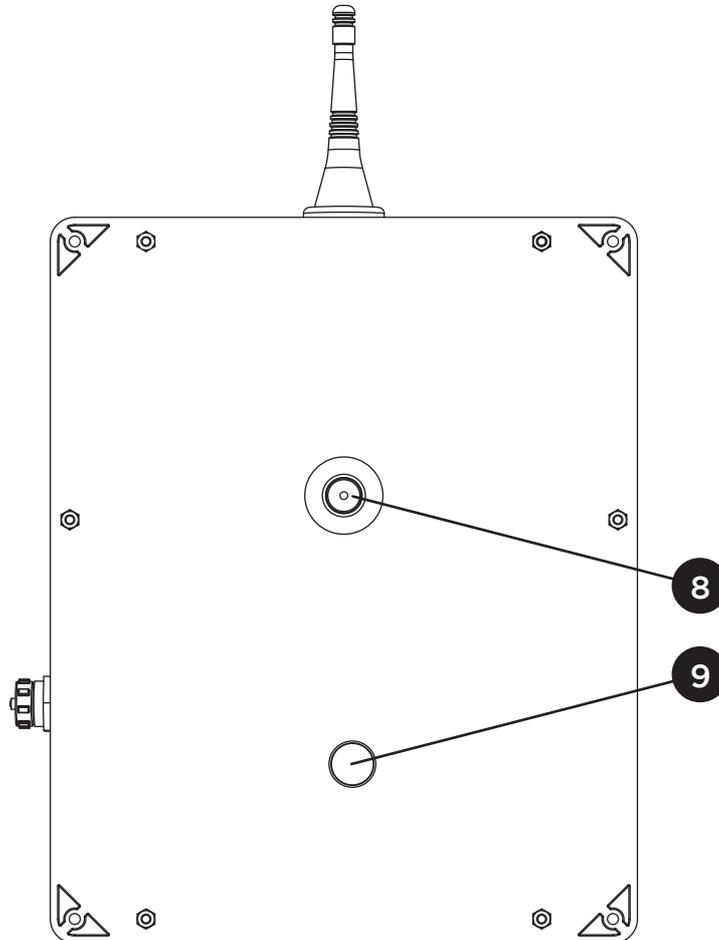


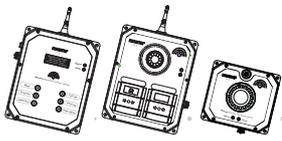
Figure 24 – Call Point Features (Rear)

8 – Foam depressor for rear tamper switch

9 – Raised boss for internal tamper switch

NOTE: * the foam tamper depressor part number is fitted to the rear tamper switch (8) to ensure that the tamper operates effectively. Replacements can be obtained from Elotec.

CAUTION: DO NOT CARRY THE CALL POINT BY THE ANTENNA. Damage to antenna may cause malfunction of the Call Point and/or reduction in its operating range.



4.2 Installation

The Elotec Confire Call Point is designed for indoor and outdoor use.

4.2.1 Mounting

The Elotec Confire Call Point must be screwed securely to a flat surface. It is intended for vertical installation onto a wall, hoarding or onto a fire trolley. Four (4) mounting holes are provided as shown below:

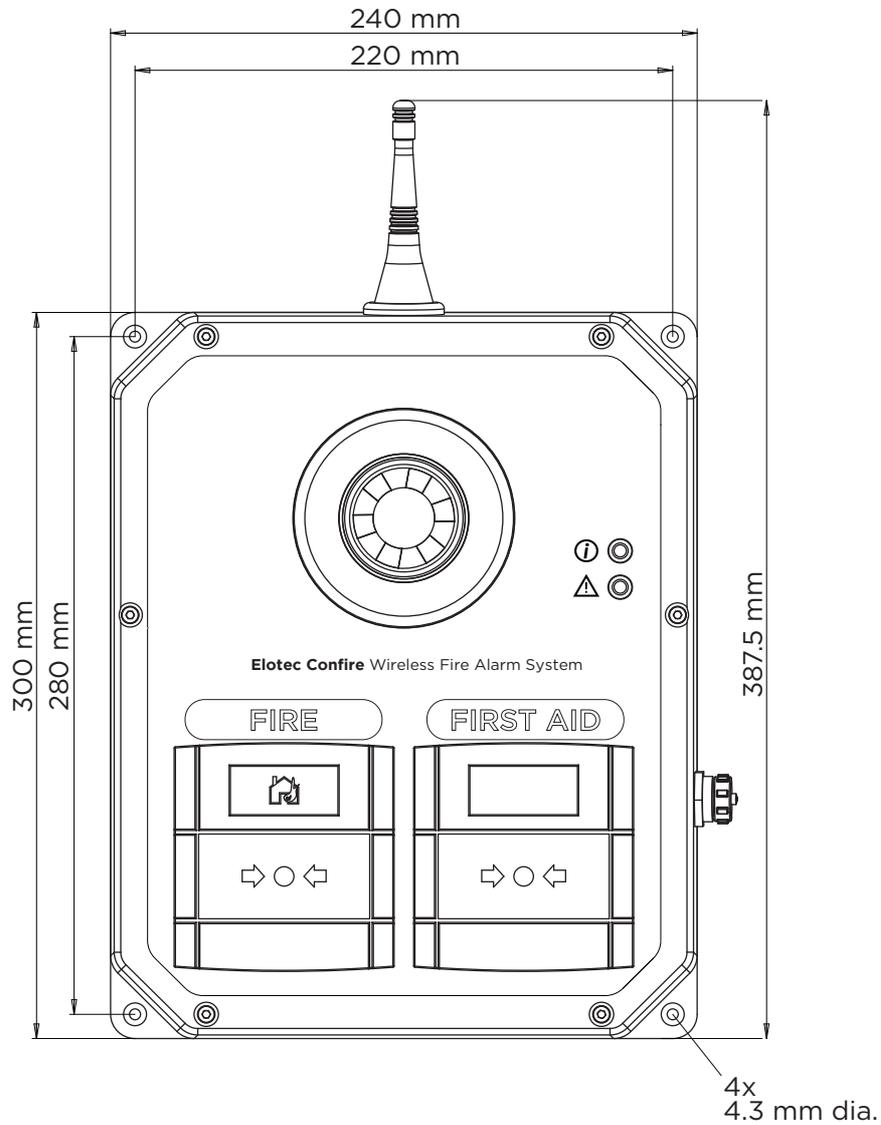


Figure 25 - Mounting and Dimensions

CAUTION: ENSURE CALL POINT IS SECURELY MOUNTED TO FLAT SURFACE. In order to prevent false tamper alarms, the mounting surface must be rigid and flat.



4.2.2 Radio Range

The Elotec Confire Call Point must be placed in a position within radio range of the Elotec Confire Base Station. See “Placement of Elotec Confire Units”, page 18 for details.

4.2.3 Setting to work

The Elotec Confire Call Point is usually configured at the factory and delivered in “Transit Mode”. To set the Call Point to work, or to change the configuration, refer to “Software Configuration (Call Point and Detector Only)”, page 67.

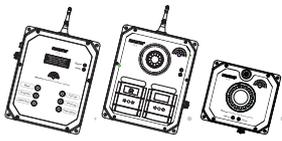
4.2.4 Testing

4.2.4.1 Test Comms

Test Comms is used to verify that all devices are connected to the network. When the “Test Comms” button is pressed on the Elotec Confire Base Station, the Status LED indicator will illuminate on all connected devices allowing them to be visually inspected. Refer to “Test Comms”, page 15 for details.

4.2.4.2 Audible and Visual (Full) Test

The “Test Alarm” is used to verify that the Call Point sounders and beacons are functioning correctly. When the “Test Alarm” button is pressed on the Elotec Confire Base Station, sounders at the Call Point and the Base Station will sound intermittently. Refer to “Test Alarm”, page 16 for details.



4.2.5 Resetting following alarm activation

After the Fire Alarm or the First Aid manual Call Point has been activated, it must be manually reset. When the Frangible Element (2) is struck, it is displaced so that the indicator band (3) is shown.

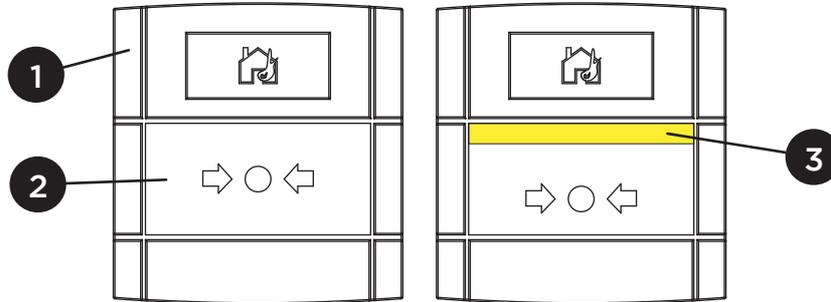


Figure 26 - Manual Call Point Normal (left), Activated (Right)

1 – Manual Call Point

2 – Resettable Frangible Element

3 – “Activated” Indication Bar (yellow)

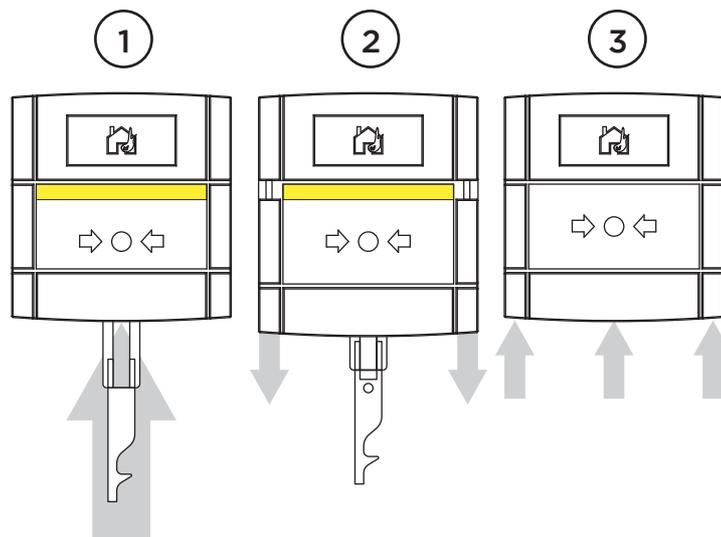
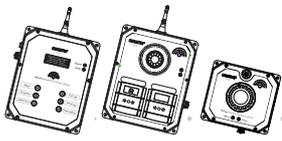


Figure 27 - Manual Call Point Reset Procedure

To reset:

1. Insert the manual Call Point reset key.
2. The lower part of the Manual Call Point body will slide downwards; Remove the key.
3. Push the lower part of the Manual Call Point body upwards until it clicks into place. The Frangible Element will also slide up into its normal position.
4. Press the “Reset” button on the Elotec Confire Base Station (see “Silencing the Alarm”, page 13).



4.3 Indicators

LED indicators are provided on the Elotec Confire Call Point body (1 – Green Status, 2 – Red Fault).

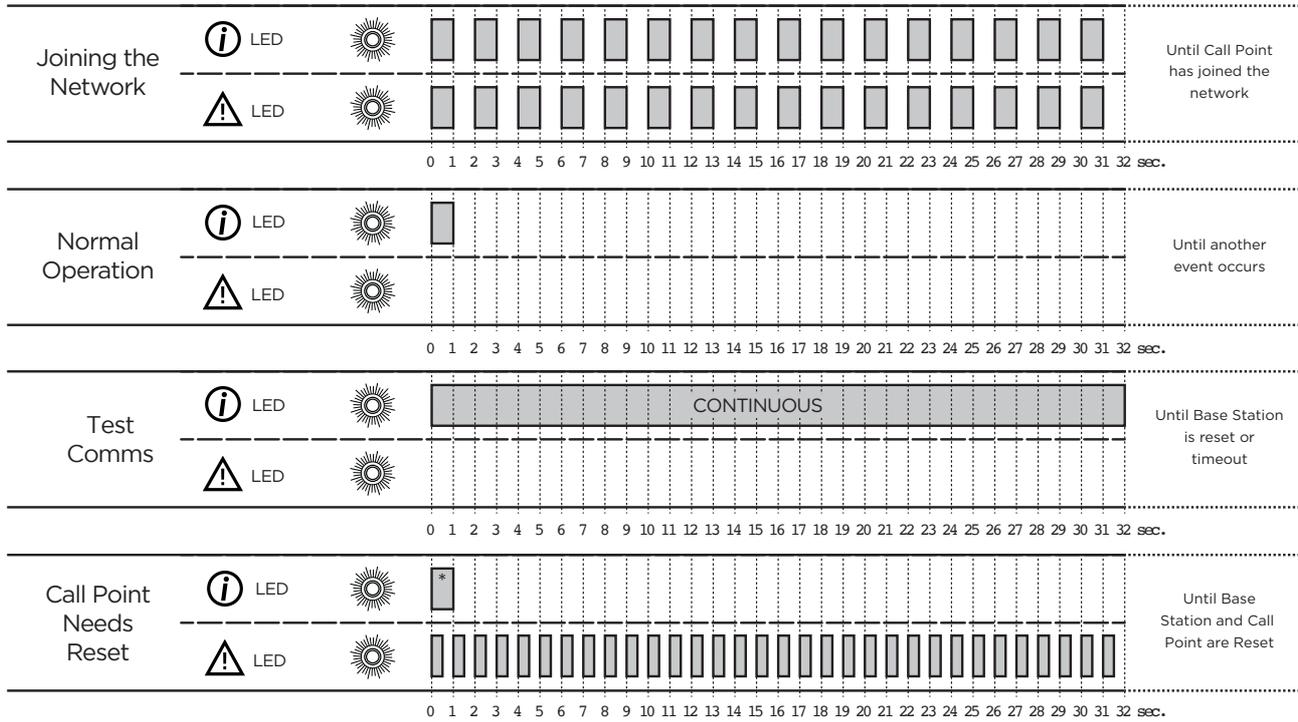
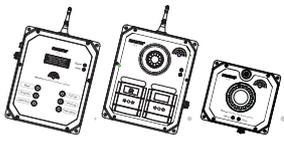


Figure 28 - Meaning of Fault and Status LED Indicators

*The Status **i** LED indicates the reception of a sync message from the Base Station. Transmission of the sync message occurs every 32 seconds, but is not necessarily coincident with the Fault LED as shown in this diagram.



4.4 Audible and Visual Alerts

The Elotec Confire Manual Call Point includes a multi-tone sounder and an LED beacon. The audible siren loudness can be configured for indoor and outdoor use.

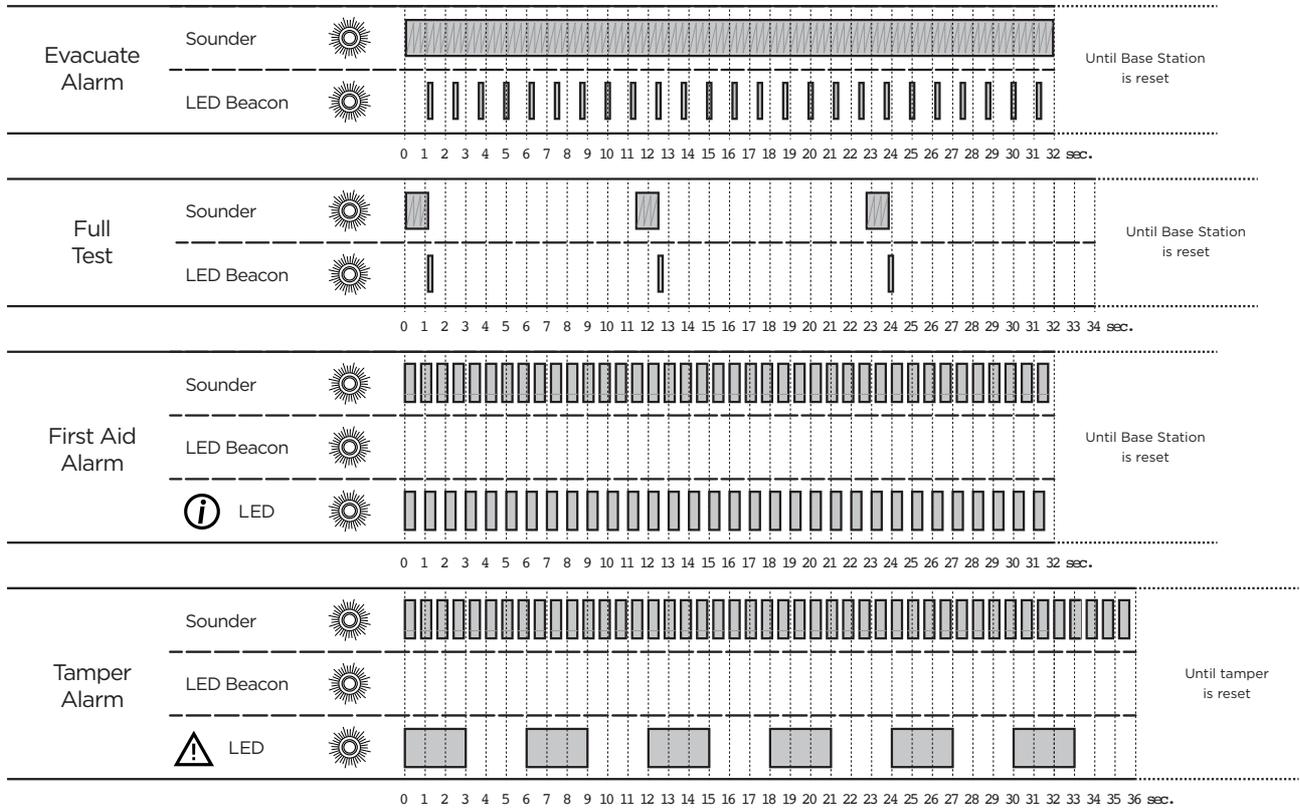
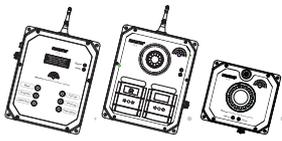


Figure 29 - Meaning of LED Beacon and Sounder



4.4.1 Setting the Siren Loudness

The Siren loudness can be set for indoor (low) and for outdoor or noisy working conditions (high) use.

You will need:

1. Allen key 3mm A/F.
2. Small flat bladed screw driver.
3. PC with Elotec Confire Tool.
4. USB-A to USB Mini-B cable.

To change the sounder loudness:

1. Set the Call Point into "transit" mode (see "Setting Transit Mode", page 69).
2. Unscrew the Call Point casing.

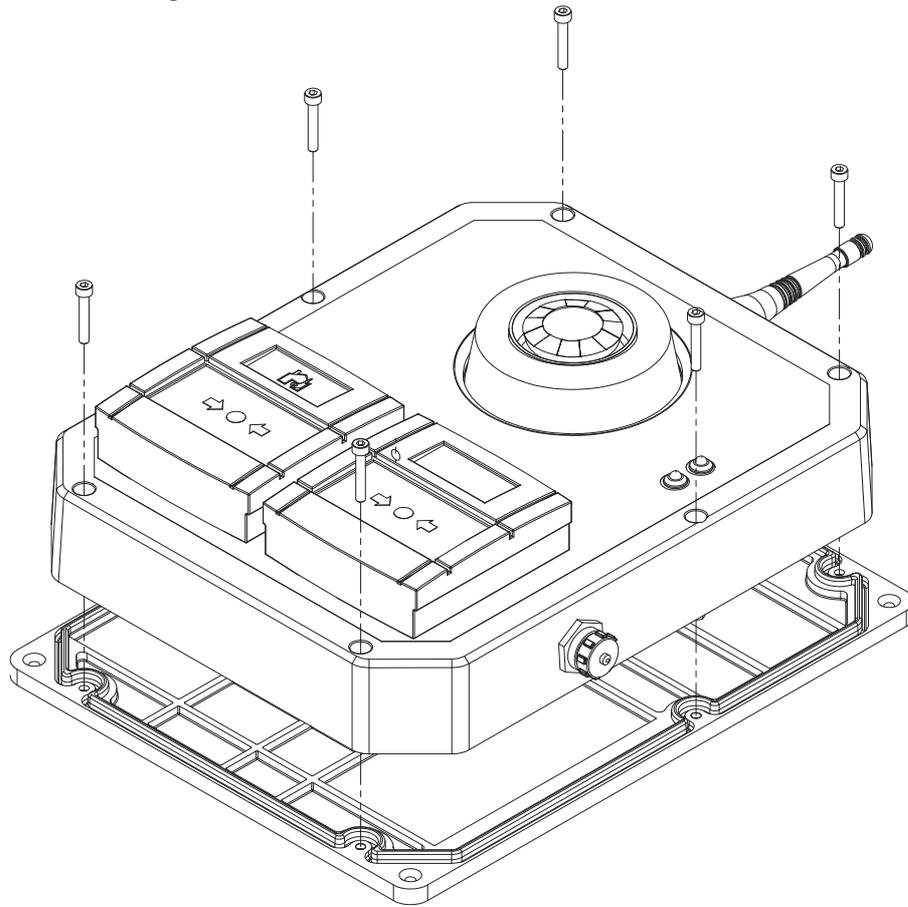


Figure 30 - Remove Call Point Case

3. Disconnect the battery packs.

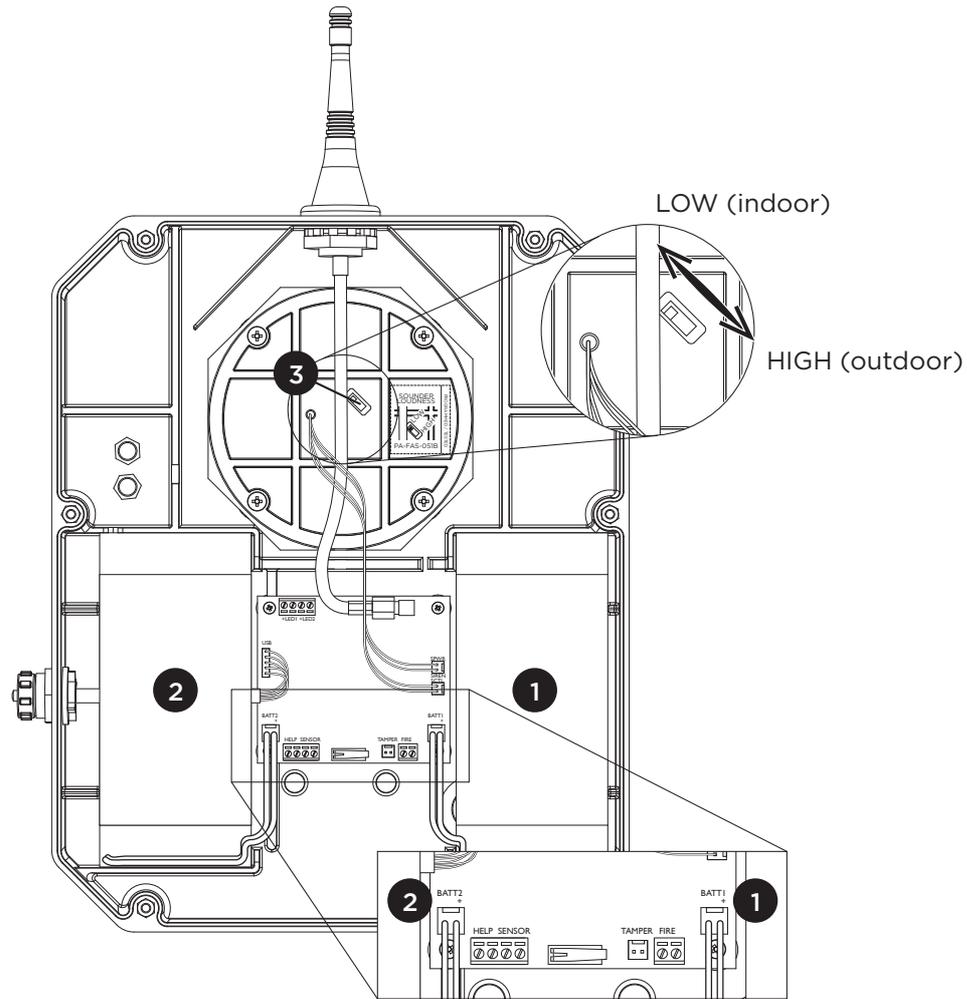
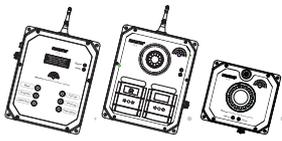


Figure 31 - Sounder Loudness Setting

NOTE: Internal wiring of the call point is not shown for clarity. When changing the Sounder Loudness, take care not to disturb any of the internal wiring.

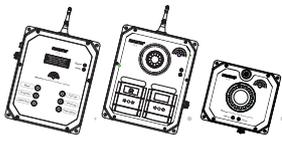
1 – Battery “BATT1”

2 – Battery “BATT2”

3 – Sounder Loudness Switch

4. Set the loudness switch to the desired position.
5. Re-connect the battery packs.
6. Replace the rear panel and secure the screws – *to prevent water and dust ingress, always ensure that the unit is properly sealed.*
7. Set the Call Point into “active” mode (see “Setting Active Mode”, page 68).

The Call Point will attempt to re-join the network.



4.5 Replacing the Battery.

The internal batteries of the Elotec Confire Call Point are designed to power the device for a period greater than three (3) years. A low battery warning is sent by the Call Point to the Base Station to indicate that replacement is needed.

You will need:

1. Allen key 3mm A/F.
2. Two battery packs (Elotec Part No. CONF-BAT).
3. PC with Elotec Confire Tool.
4. USB-A to USB Mini-B cable.

To replace the battery:

1. Set the Call Point into "transit" mode (see "Setting Transit Mode", page 69).
2. Unscrew the Call Point casing.

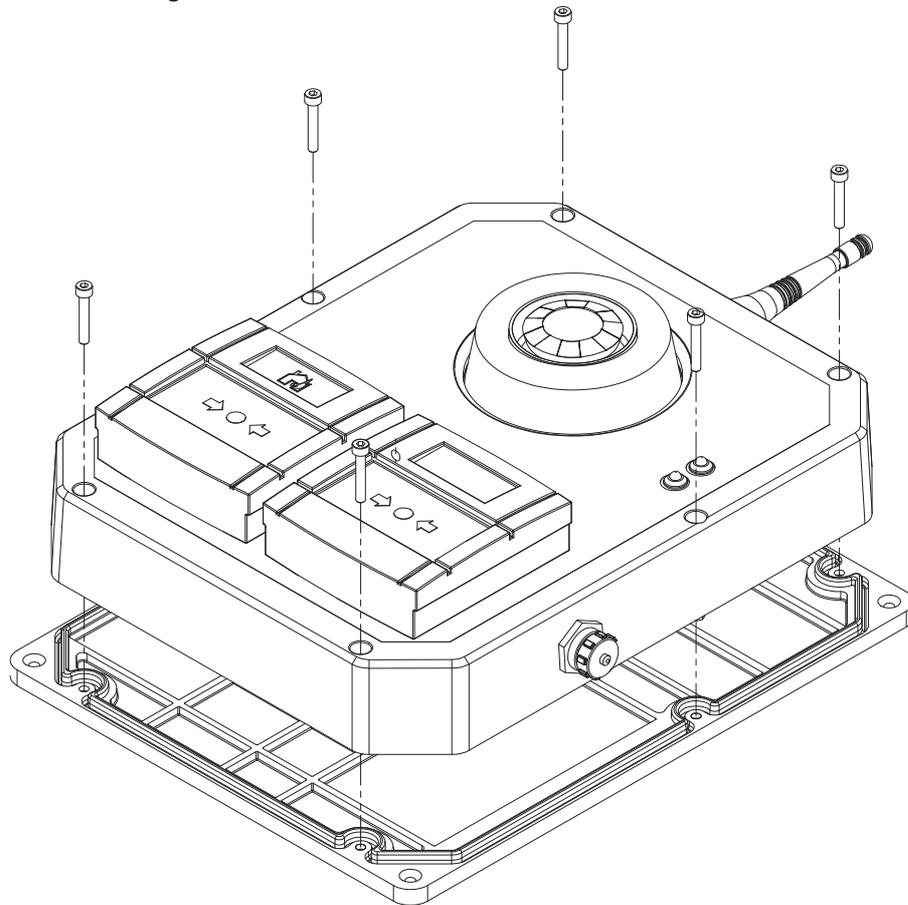


Figure 32 - Remove Call Point Case

3. Remove the battery packs.

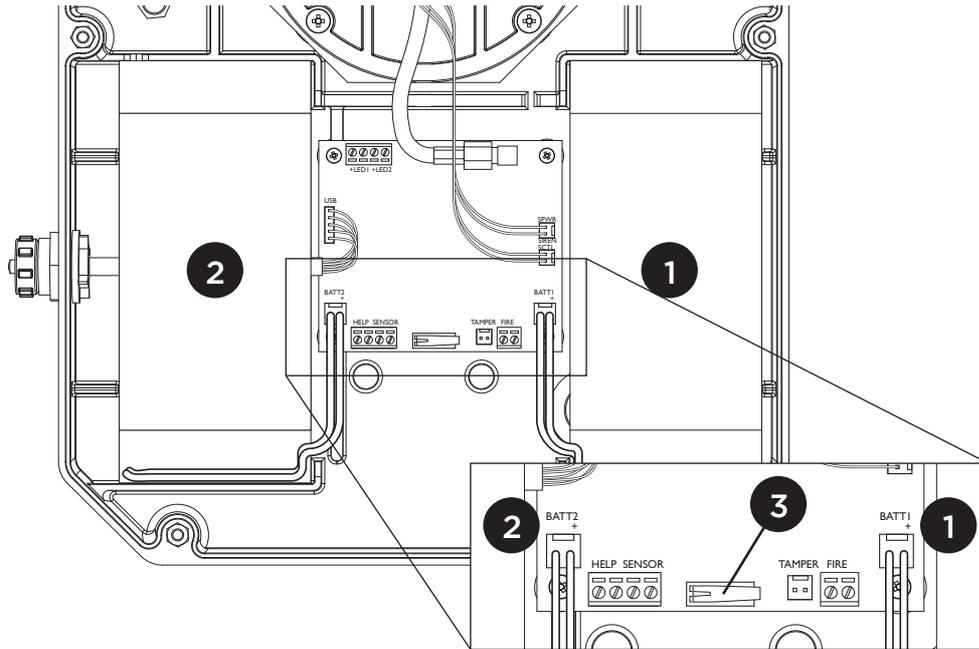
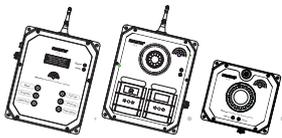


Figure 33 - Battery Pack location and identification

NOTE: Internal wiring of the call point is not shown for clarity. When changing the batteries, take care not to disturb any of the internal wiring.

1 – Battery “BATT1”

2 – Battery “BATT2”

3 – Internal Tamper Switch

4. Replace the battery packs with two Elotec Part No. CONF-BAT.
5. Replace the rear panel and secure the screws – *to prevent water and dust ingress, always ensure that the unit is properly sealed.*
6. Set the Call Point into “active” mode (see “Setting Active Mode”, page 68).
7. Set the battery installation date using the software configuration tool (see “Basic Settings”, page 70 for details).

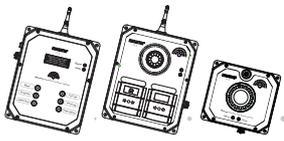
The Call Point will attempt to re-join the network.

WARNING: DO NOT RECHARGE BATTERY PACKS. The battery packs are not rechargeable. Attempts to recharge the battery pack may result in fire, explosion or injury to personnel.

CAUTION: DO NOT REVERSE POLARITY. The battery pack connectors are mechanically protected against reverse polarity. Attempts to force the connector into any other position may result in damage to the device or the batteries.

CAUTION: ONLY REPLACE BATTERY PACKS WITH ELOTEC PART No. CONF-BAT. Use of third party battery packs may cause malfunction or reduction in the devices operating life.

CAUTION: ALWAYS REPLACE BOTH BATTERY PACKS. Replacing one battery pack may cause malfunction or reduction in the operating life of the unit.



5 Elotec ConFire Heat and Smoke Detectors

The Elotec ConFire Heat and Smoke Detectors are comprised of Radio Base and Heat Detector or Smoke Detector. The Elotec part number for the Radio Base plus Detector Head is given below:

CONF-HEAT – Radio base with AIR type heat detector head

CONF-OPT – Radio base with Optical smoke detector head

5.1 Features

The features and indicators of the Elotec ConFire Smoke and Heat Detectors are shown in the figure below:

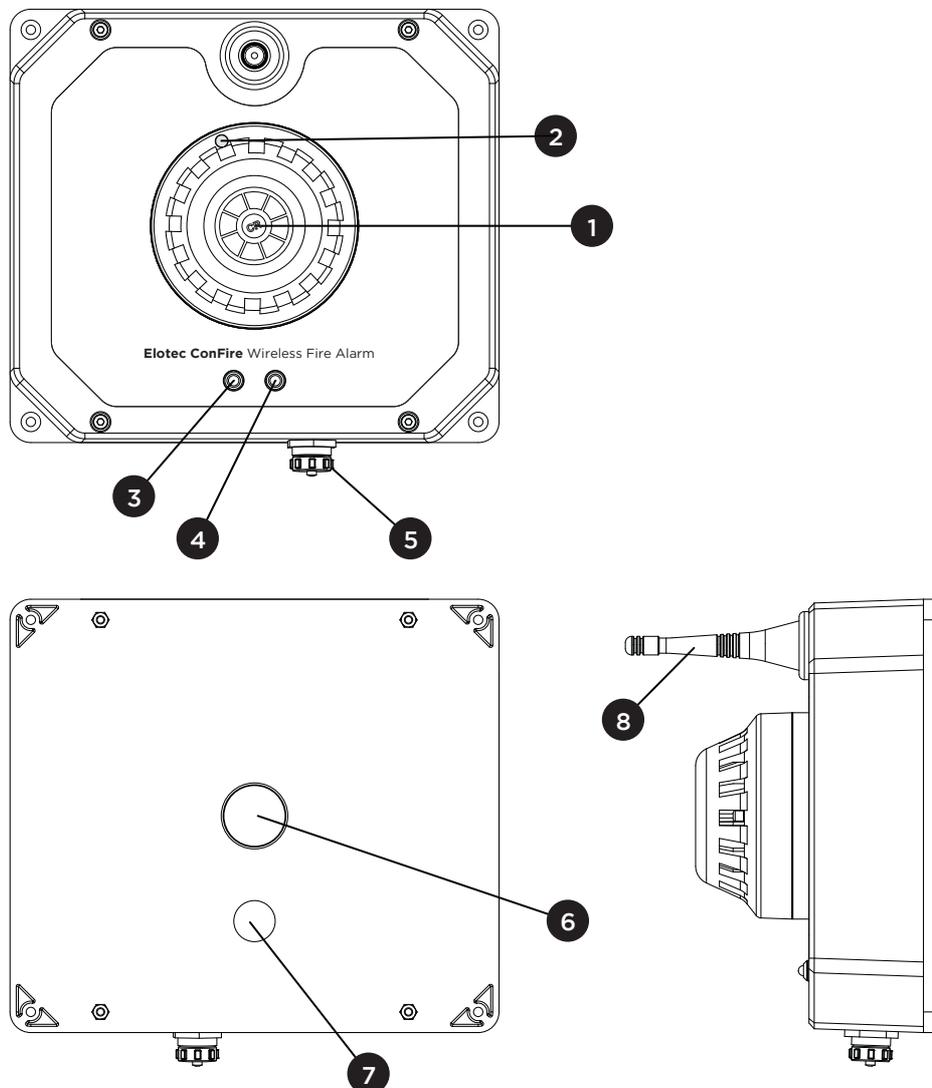
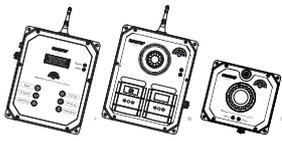


Figure 34 – Heat Detector Features



- 1 – Heat / Smoke Detector Head
- 2 – Detector Triggered LED (red)
- 3 –  Status LED indicator (green)
- 4 –  Fault LED indicator (red)
- 5 – USB configuration port and dust cap
- 6 – Foam depressor for rear tamper switch
- 7 – Raised boss for internal tamper switch
- 8 – Radio antenna

NOTE: * the foam tamper depressor is fitted to the rear tamper switch (6) to ensure that the tamper operates effectively. Replacements can be obtained from Elotec.

CAUTION: DO NOT CARRY THE DETECTOR BY THE ANTENNA. Damage to antenna may cause malfunction of the detector and/or reduction in its operating range.



5.2 Installation

The Elotec Confire Heat and Smoke Detectors are designed for indoor use only.

5.2.1 Mounting

The Elotec Confire Heat / Smoke Detector must be screwed securely to a flat surface in the ceiling of the area to be protected. Four (4) mounting holes are provided as shown in Figure 35. Detectors should be installed according to the rules and regulations in place - it is the responsibility of the installer to understand and comply with these rules and regulations.

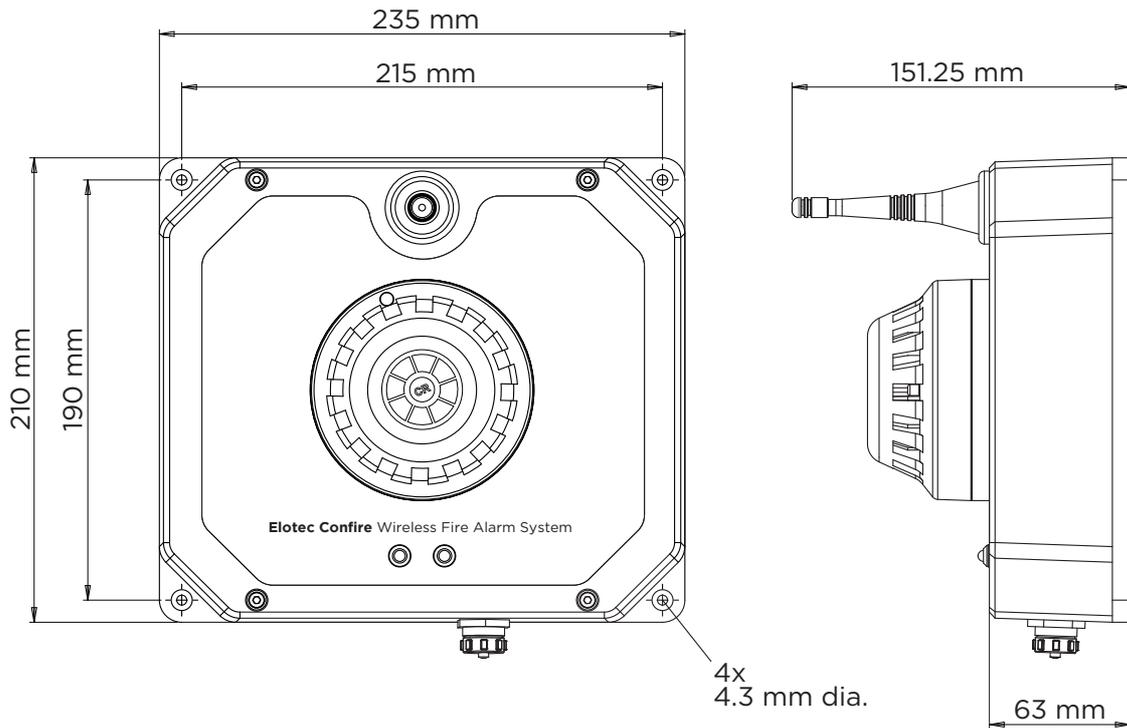
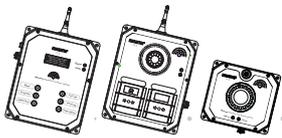


Figure 35 - Mounting and Dimensions

CAUTION: ENSURE DETECTOR IS SECURELY MOUNTED TO FLAT SURFACE. In order to prevent false tamper alarms, the mounting surface must be rigid and flat.



BS 5839 gives guidance for placement of the Heat / Smoke Detector for acceptable coverage and effectiveness of the detector. An example is given in Figure 36, below.

If in doubt, seek advice from Elotec AS or a qualified installer.

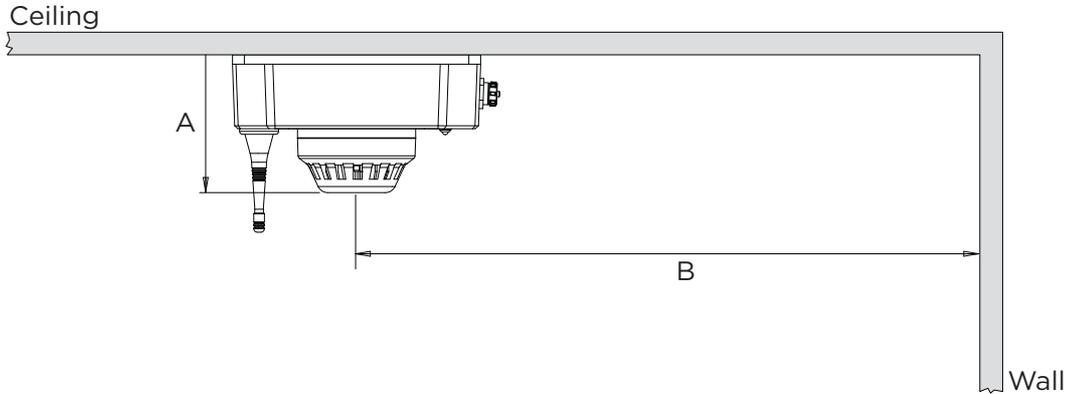


Figure 36 – Example Placement of Detectors

	Distance A (max.)	Distance B (min.)
Heat Detector	150 mm	500 mm
Smoke Detector	600 mm	500 mm

5.2.2 Radio Range

The Elotec Confire Detector must be placed in a position within radio range of the Elotec Confire Base Station. See “Placement of Confire Units”, page 18 for details.

5.2.3 Setting to work

The Elotec Confire Detector is usually configured at the factory and delivered in “Transit Mode”. To set the Detector to work, or to change the configuration, refer to “Software Configuration (Call Point and Detector Only)”, page 67.

5.2.4 Testing

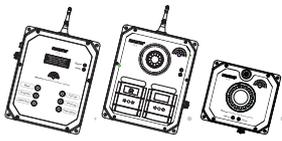
5.2.4.1 Test Comms

Test Comms is used to verify that all units are connected to the network. When the “Test Comms” button is pressed on the Elotec Confire Base Station, the Status LED indicator will illuminate on all connected units allowing them to be visually inspected.

Refer to “Test Comms”, page 15 for details.

5.2.4.2 Audible and Visual (Full) Test

The detectors are not tested in full test mode.



5.2.4.3 Functional Test (Smoke Detectors)

Smoke detectors may be tested using an aerosol type smoke alarm tester.

WARNING: DO NOT USE DEVICES NOT INTENDED FOR SMOKE DETECTOR TESTING! Use of smoke generating devices that are not intended for the purpose of testing smoke detectors may permanently damage or affect the performance of the detector.

5.2.4.4 Functional Test (Heat Detectors)

WARNING: DO NOT USE DEVICES NOT INTENDED FOR HEAT DETECTOR TESTING! The use of heat generating devices (such as paint stripper heat guns) that are not intended for the purpose of testing heat detectors may permanently damage or affect the performance of the detector.

5.2.5 Resetting following alarm activation

After the Smoke Detector is activated, an LED indicator on the detector head will be illuminated until it is reset (see “Silencing the Alarm”, page 13).

To reset the Detector Head:

1. Press the “Reset” key on the Elotec Confire Base Station (see “Silencing the Alarm”, page 13).

5.3 Indicators

LED indicators are provided on the Elotec Confire Heat Detector main body (2 – Green Status ⓘ, 3 – Red Fault ⚠) and the detachable Heat Detector head (1 – Red Triggered).

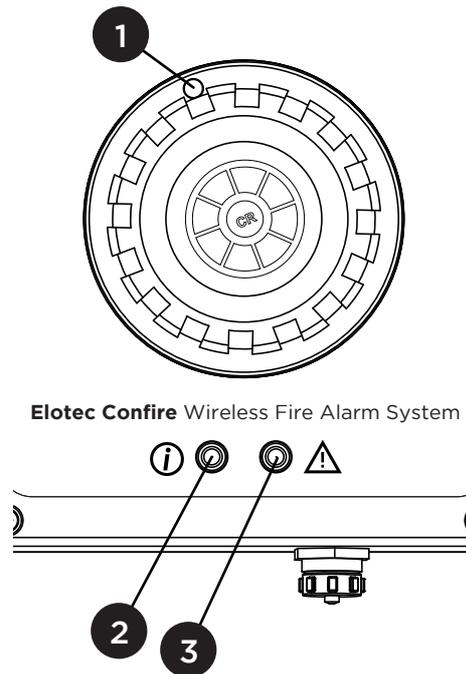


Figure 37 - Location of indicator LEDs

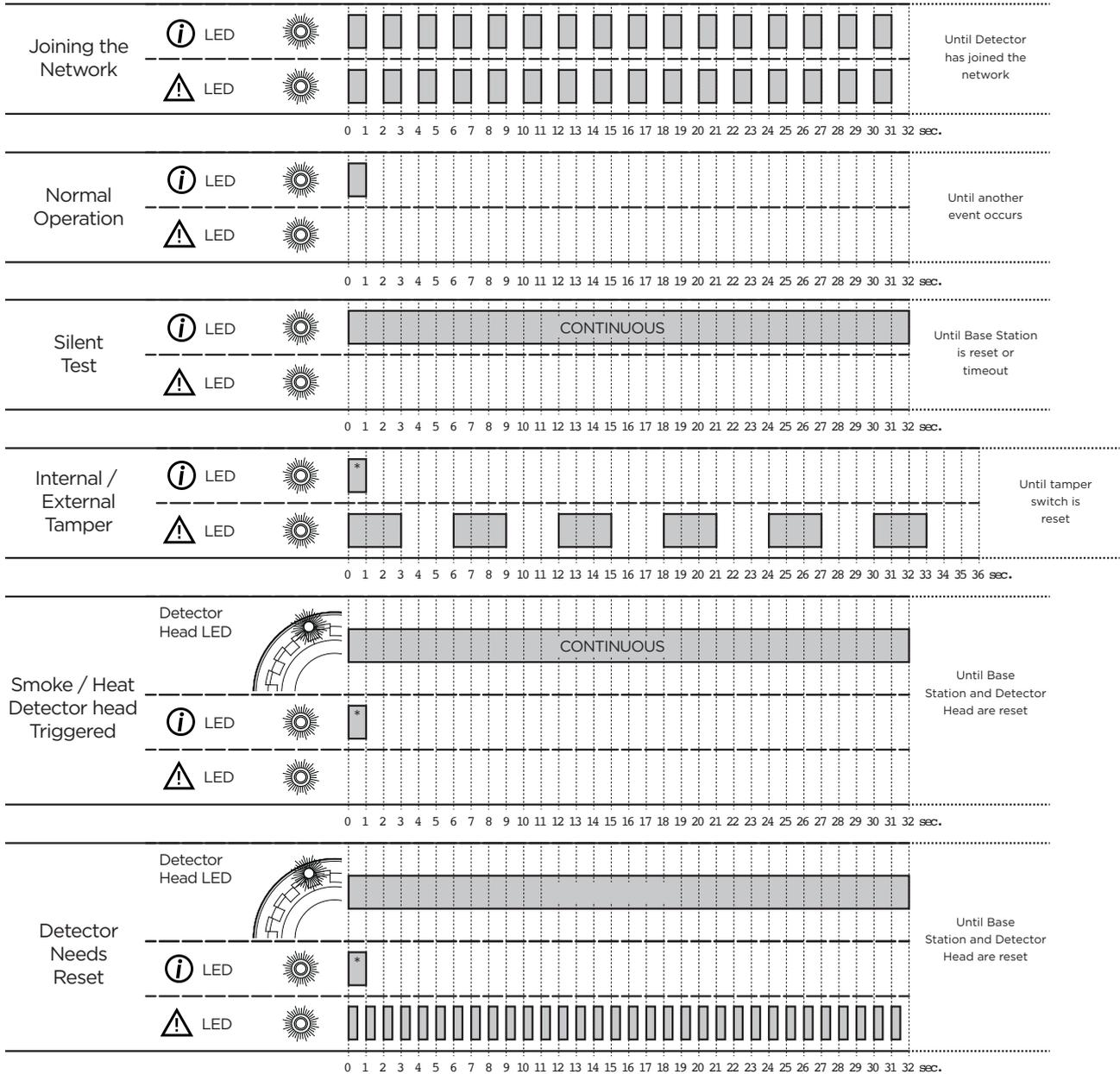
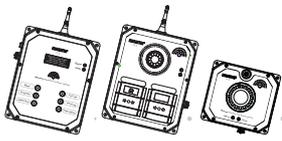


Figure 38 - Meaning of LED Indicators

*The **i** Status LED indicates the reception of a sync message from the Base Station. Transmission of the sync message occurs every 32 seconds, but is not necessarily coincident with the **A** Fault LED as shown in this diagram.



5.4 Replacing the Battery

The internal batteries of the Elotec Confire Detector are designed to provide power for a period greater than three (3) years. A low battery warning is sent by the Detector to the Base Station to indicate that replacement is needed.

You will need:

1. Allen key 3mm A/F.
2. Two battery packs (Elotec Part No. CONF-BAT).
3. PC with Elotec Confire Configuration Tool.
4. USB-A to USB Mini-B lead.

To replace the battery:

1. Set the Detector into "transit" mode (see "Setting Transit Mode", page 69).
2. Unscrew the detector casing.

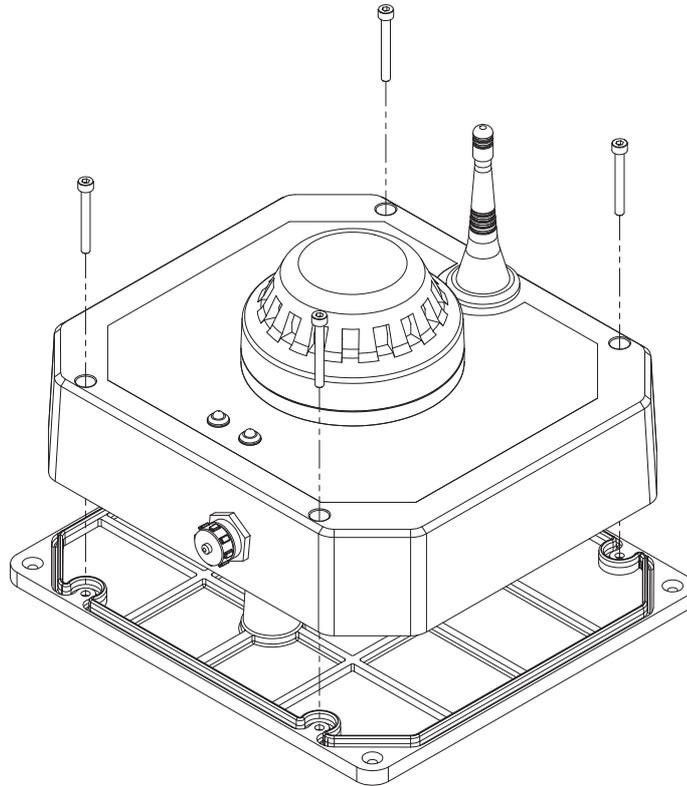
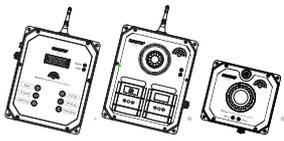
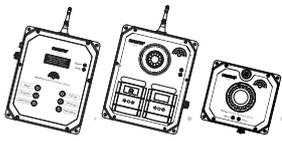


Figure 39 - Remove Detector Case

3. Remove the battery packs.
4. Replace the battery packs with two CONF-HEAT.



CAUTION: ALWAYS REPLACE BOTH BATTERY PACKS. Replacing one battery pack may cause malfunction or reduction in the devices operating life.



6 Elotec Confire Tool

6.1 Software Configuration (Base Station Only)

The functionality of the Elotec Confire Fire Detection and Alarm System can be configured using the Elotec Confire configuration tool.

You will need:

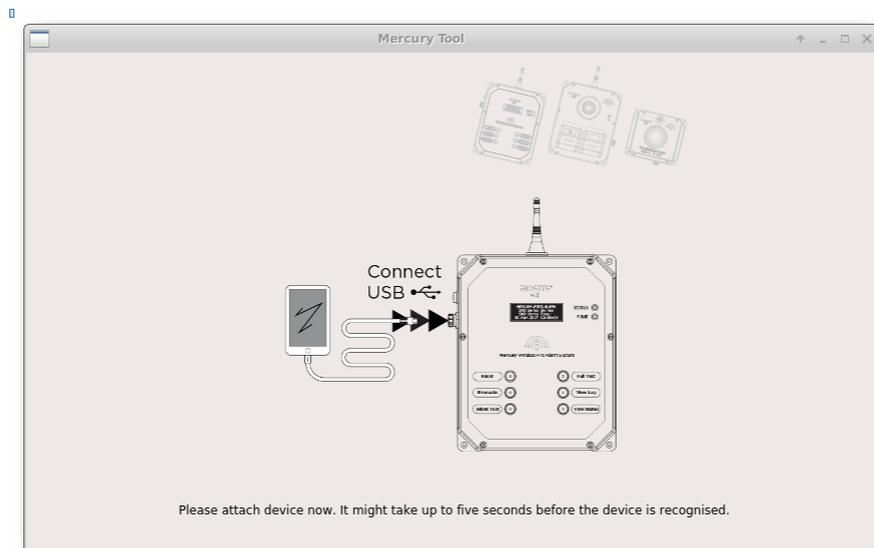
1. USB-A to Mini-B Cable
2. PC running Elotec Confire Configuration Tool (CONF-BAT)

NOTE: Some minor aesthetic variations may exist between Windows, Linux and Tablet versions of the software. The Linux version is shown in these instructions. Features may be added, removed or modified at any time.

6.1.1 Connecting

Instructions:

1. Run the Elotec Confire Tool



2. Connect the PC to the Elotec Confire Base Station using the USB Mini-B cable



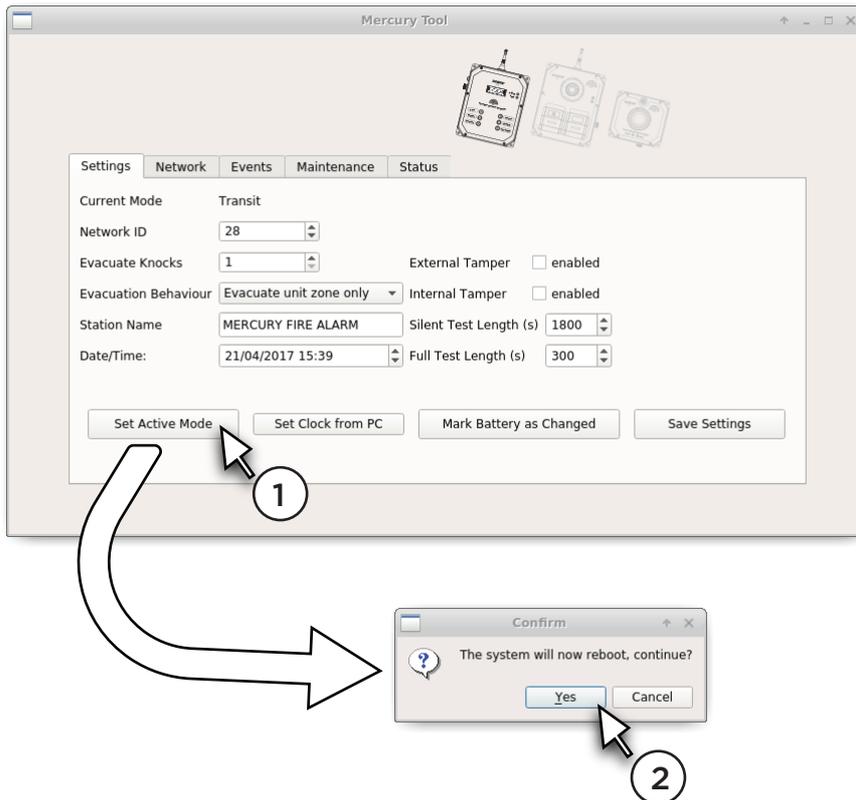
6.1.2 Setting Active Mode

The Base Station will normally be delivered in a low power consumption “Transit” mode. In order to use the Base Station, it must be activated.

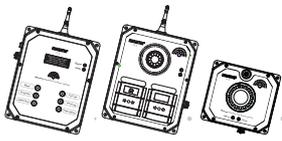
CAUTION: CONFIRM SETTINGS BEFORE SETTING ACTIVE. Before setting the Base Station active, check the Network ID. The Network ID is assigned by Elotec and should not normally be changed without contacting Elotec. Setting an incorrect value may interfere with other nearby networks.

Instructions:

1. In the “Settings” tab, click the “Set Active Mode” button



2. At the dialog box, press “Yes”
The Base Station will restart



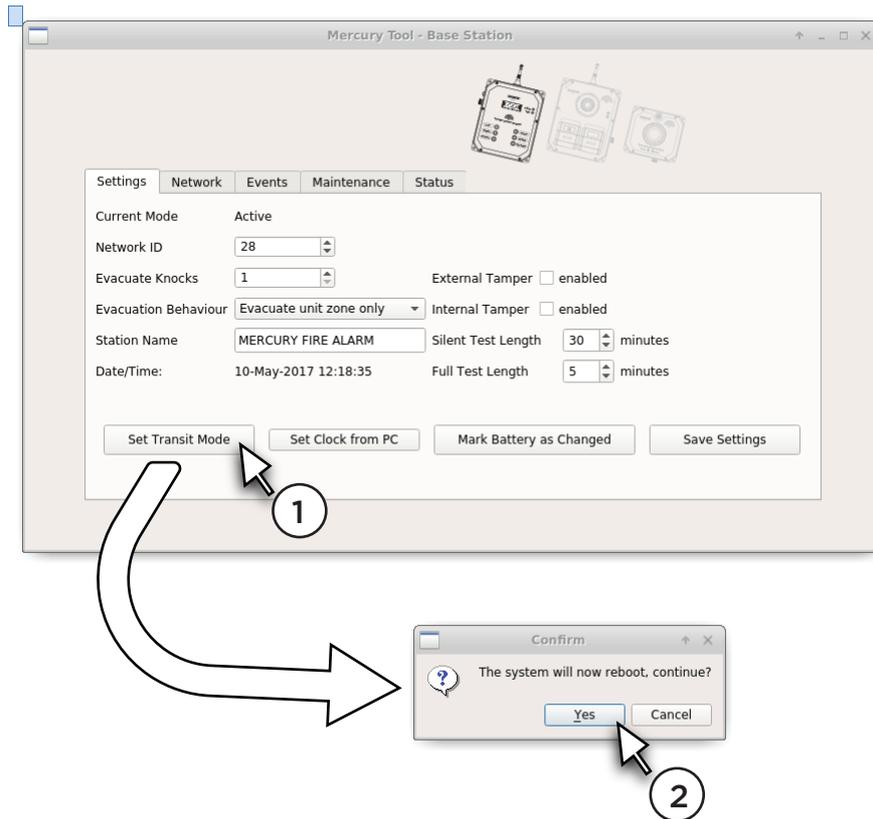
6.1.3 Setting Transit Mode

During long periods of inactivity (storage) or during transit, the Base Station should be placed into the low power consumption “transit” mode.

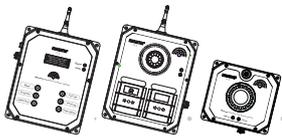
NOTE: When the Base Station is in Transit mode, any other units in the network will continue to try to connect to the Base Station which will reduce their battery life. It should also be noted, that the local alarm (Fire or First Aid) will still sound at the Call Point, but it will not be possible to silence the alarm without removing the batteries.

Instructions:

1. In the “Settings” tab, click “Set Transit Mode”.

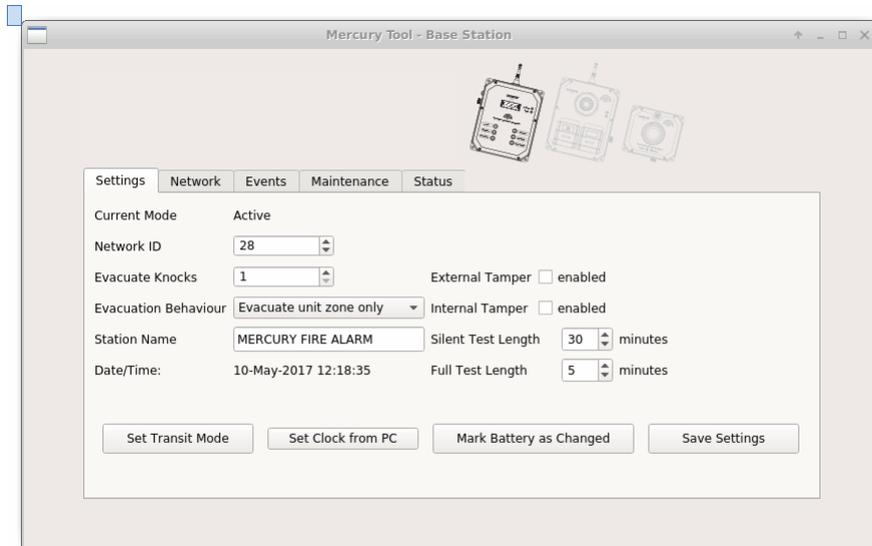


2. At the dialog box, press “Yes”
The unit will restart. The 4-line OLED display will switch off.



6.1.4 Basic Settings

The basic settings allow the Base Station to be configured for use and to set up common features such as zone behaviour.



Current Mode

Displays the Base Station's current mode:

Active – the Base Station will attempt to communicate with other units in the network.

Transit – the Base Station is in the low power consumption “transit” mode. Normal functions and controls are disabled until the unit is activated (see “Setting Active Mode”, page 68).

Network ID

Sets the Network ID in which the Base Station should communicate (1-65535).

In order to avoid interference with other Elotec Confire systems, the network ID must be unique within the radio range of the device. Consult Elotec for advice when changing the Network ID. The Network ID is assigned by Elotec and should not normally be changed.

Evacuate Knocks

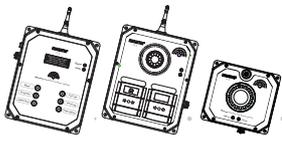
Sets how many Call Point activations are needed before the evacuate is sounded (see “Zones”, page 20).

Evacuate Knocks = 1: Only one Call Point activation is needed to evacuate the zone or site.

Evacuate Knocks = 2: Two Call Point evacuations are needed to evacuate the zone or site



NON-EN 54. The double knock (Evacuate Knocks = 2) feature is not EN 54 compliant. Use of this feature is entirely at the discretion of the user.



External Tamper*

When checked, the external tamper switch on the back of the case will be enabled. An audible alert will sound at Base Station to indicate that the tamper has been triggered. When un-checked, no alert is generated.



***NON-EN 54.** The external tamper switch is a requirement of EN 54. Switching off the external tamper is at the user's discretion.

Internal Tamper*

When checked, the internal tamper switch inside the case will be enabled. An audible alert will sound at Base Station to indicate that the tamper has been triggered. When un-checked, no alert is generated.



***NON-EN 54.** The internal tamper switch is a requirement of EN 54. Switching off the internal tamper is at the user's discretion.

Station Name

Sets the name of the network which is displayed on the Base Station's multi-line OLED display.

Date Time

Displays the current time according to the internal clock of the Base Station. The time may be set by pressing the "Set Clock from PC" button.

CAUTION! Failure to set the time and date may result in unexpected event logging behaviour!

Test Comms Length

Sets the timeout for the Comms Test (default 30 minutes).

Test Alarm Length

Sets the timeout for the Full Test (Test Alarm) (default 6 minutes).

Set Transit Mode

When in Active Mode, this button sets the unit into Transit Mode – see "Setting Transit Mode", page 57.

Set Active Mode

Sets the unit into Active Mode – see "Setting Active Mode", page 56.

Mark Battery as Changed

The internal memory stores the date that the battery packs were installed. Following replacement of the battery, clicking on the button will update the date stored in internal memory to the current date (month and year).

Save Settings

Press this button after updating of any settings on this page to store the values into the internal memory.

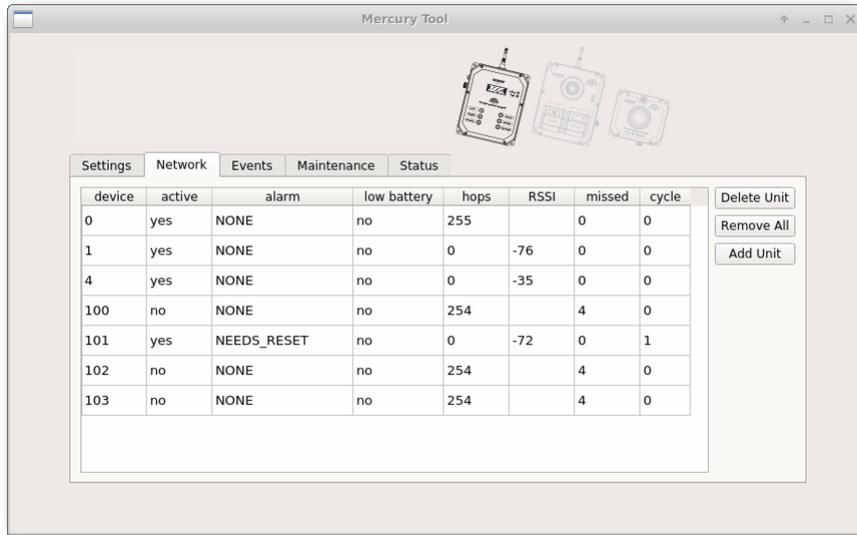
*Call point only feature.

CAUTION: TAKE CARE WHEN CONFIGURING DEVICE! Setting an incorrect Network ID may prevent other units from connecting to the Base Station, or may cause the Base Station to interfere with the operation of another nearby system.



6.1.5 Adding and Removing Units (Network)

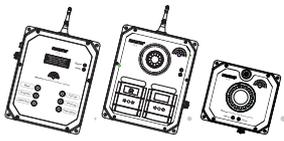
Units may be added to, or removed from, the network as required. Up to 240 units are supported.



The table of units gives the following information:

- Device** Displays the ID of the unit.
- Active** Displays whether the unit is Active.
 - Yes – the device has communicated to the Base Station.
 - No – the devices has not (yet) communicated to the Base Station.
- Alarm** Displays the alarm state of the unit.
 - NONE – no alarm is triggered.
 - FIRE – a fire Call Point or detector has been triggered.
 - HELP – a first aid Call Point has been triggered.
- Low Battery** Indicates a low battery warning (yes) or battery normal (no).
- Hops** Displays the number of hops (mesh network nodes) through which the unit is communicating – i.e. if the unit is communicating to the Base Station through two other units, the number of hops will be 2.

If a large number of units have a number of hops greater than 0, it might indicate that the Base Station is not ideally located and that some remedial work is required – see “Placement of Confire Units”, page 18.
- RSSI** (Received Signal Strength Indication) Displays the received signal strength from the unit (or from the mesh network node acting as a repeater if number of hops is greater than 0). Units with a very low received signal strength (less than -100 dBm) may suffer from connection problems under some circumstances – see “Placement of Confire Units”, page 18.
- Missed** For service engineer information only.



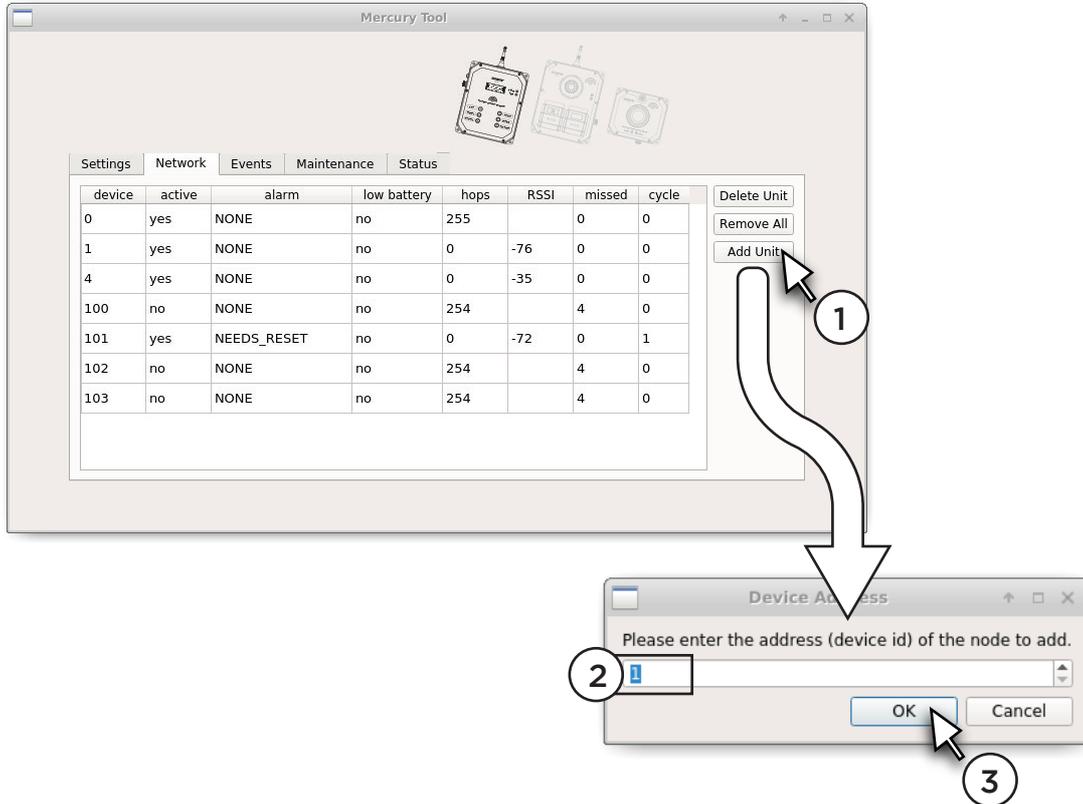
Cycle

For service engineer information only.

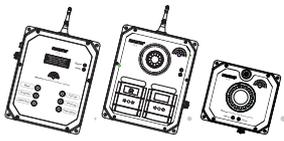
6.1.5.1 Adding a Unit

Instructions:

1. In the "Network" tab, click "Add Unit"



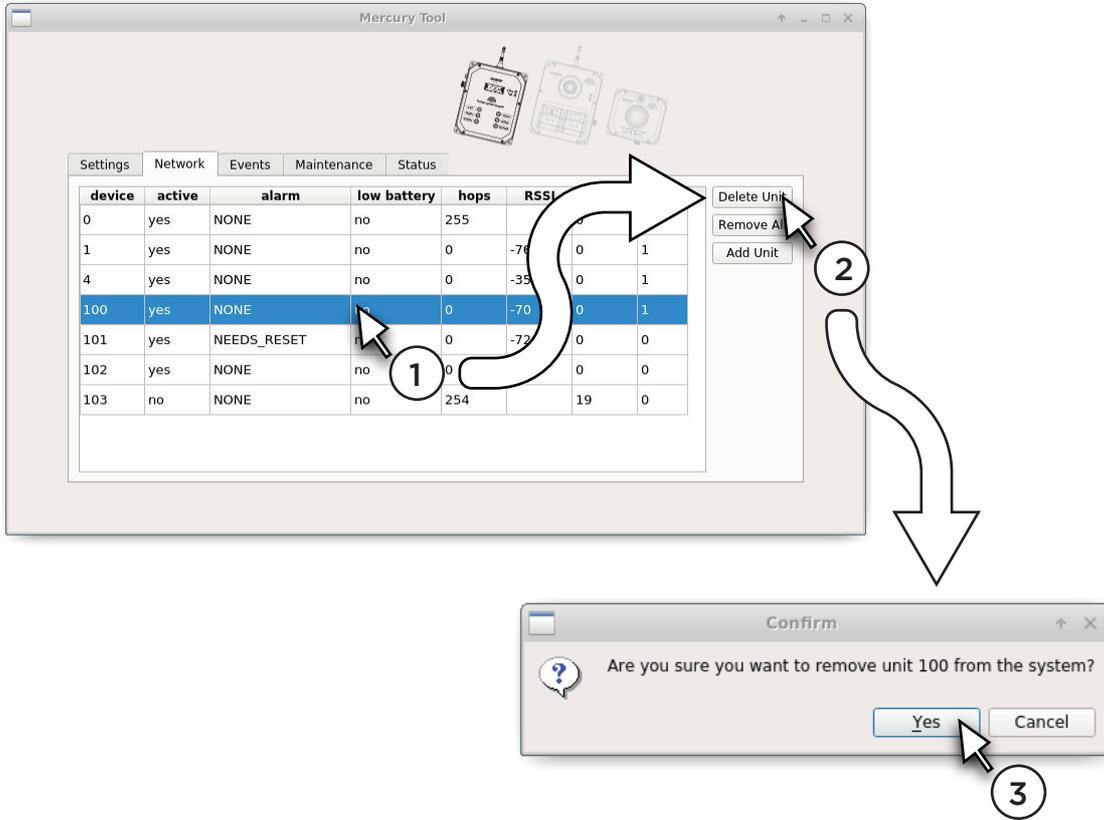
2. Enter the unit ID for the Unit to be added
3. Press "OK"



6.1.5.2 Removing a Unit

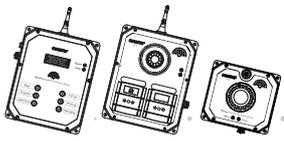
Instructions:

1. In the “Network” tab, click on the unit to be removed from the network
2. Click “Delete Unit”



3. Press “Yes”

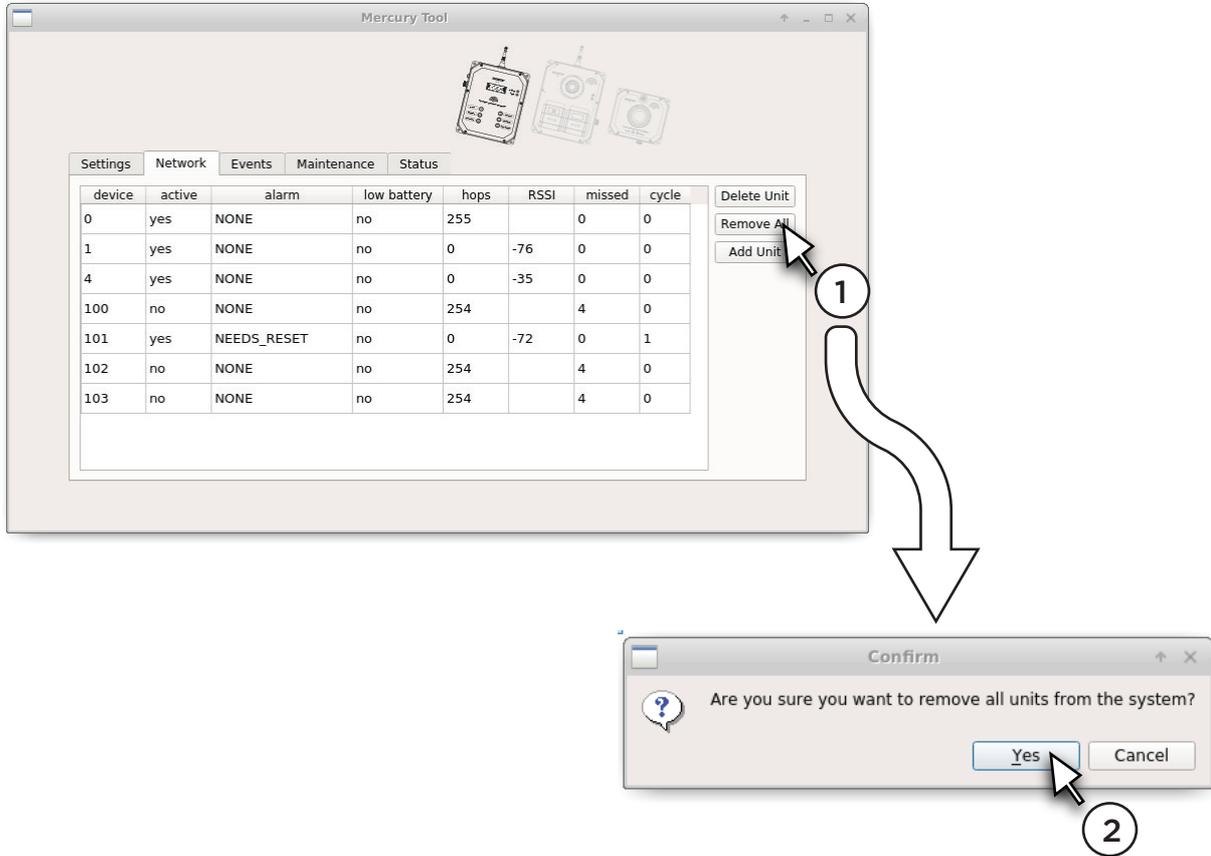
NOTE: Device 0 corresponds to the Base Station and cannot be deleted.



6.1.5.3 Removing All Units

Instructions:

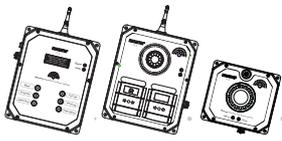
1. In the “Network” tab, click on the unit to be removed from the network
2. Click “Remove All”



3. Press “Yes”

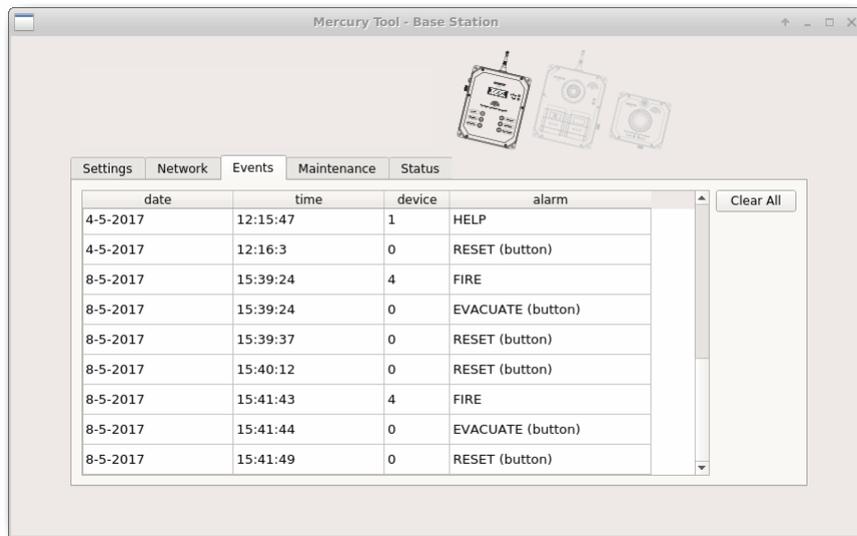
In order to use the Base Station, it is now necessary to add more units.

NOTE: Device 0 corresponds to the Base Station and cannot be deleted.



6.1.6 Event Logs

The Events tab provides a log of system activity such as alarms and tamper switch activations.



Date*

Shows the date that the event occurred.

Time*

Shows the time that the event occurred.

Device

Shows the ID of the unit that caused the event.

Alarm

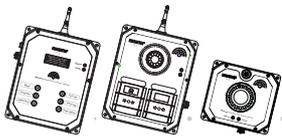
Shows the event

- RESET (button)* – reset button pressed.
- TEST COMMS (button)* – test comms button pressed.
- TEST ALARM (button)* – test alarm button pressed.
- EVACUATE (button)* – evacuate button pressed.
- TAMPER* – internal or external tamper switch triggered.
- HELP* – help Call Point triggered.
- FIRE* – fire Call Point or detector triggered.

Clear All

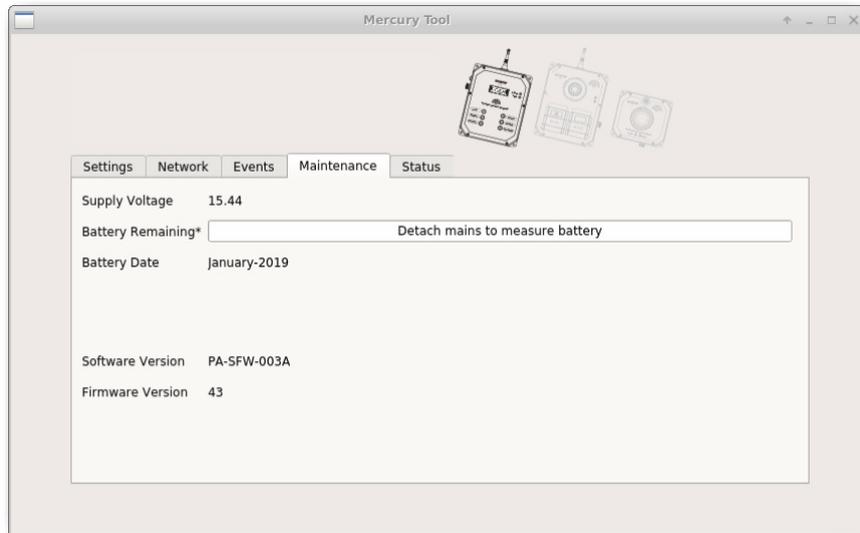
Pressing this button will permanently clear all events from the Base Station memory.

* The date and time stored are based on the Base Station internal clock which should be set according to “Basic Settings”, page 58.



6.1.7 Maintenance

The Maintenance window provides information that may be useful to the installer or maintainer and can assist with problem solving.



Supply Voltage

Displays the supply voltage. To measure the battery voltage, the mains supply must be disconnected.

Battery Remaining

The battery remaining bar estimates the remaining charge in the battery packs. In order to avoid replacing batteries on site, the battery level should be checked before deploying a unit to site. To measure the battery voltage, the mains supply must be disconnected.

Battery Date

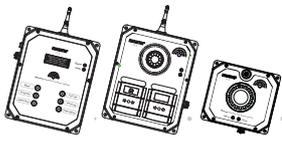
Displays the date that the battery packs were installed.

Software Version

Displays the current version of the Elotec Confire tool.

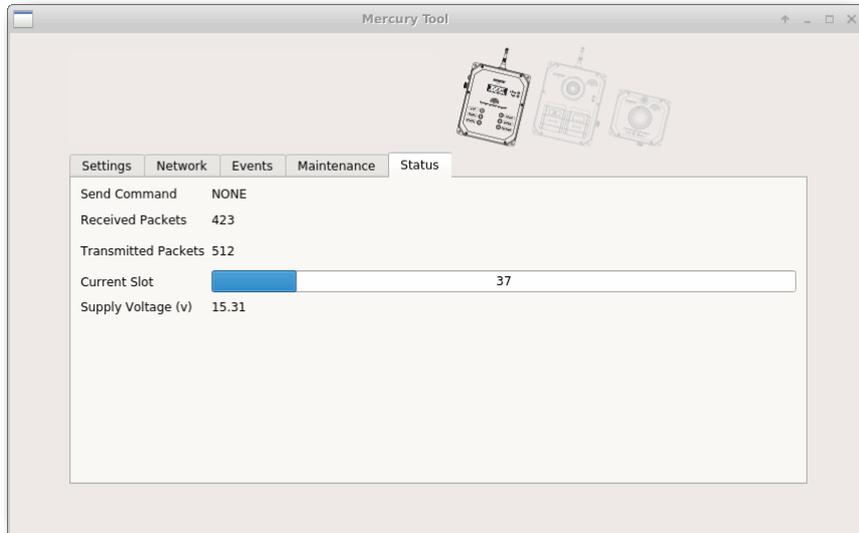
Firmware Version

Displays the current version of the Elotec Confire unit firmware.



6.1.8 Unit Status

The unit status window provides information that may be useful to the installer or maintainer and can assist with problem solving. The unit status window is not available in Transit mode.



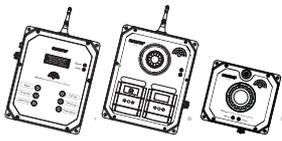
Send Command *For service engineer information only.*

Received Packets Displays a counter of the number of packets received. The frequency at which packets are received will vary according to the network configuration. A low Received Packets count may indicate network issues – see “Placement of Confire Units”, page 18.

Transmitted Packets Displays a counter of the number of transmitted packets.

Current Slot *For service engineer information only.*

Supply Voltage Displays the supply voltage. To measure the battery voltage, the mains supply must be disconnected.



6.2 Software Configuration (Call Point and Detector Only)

The functionality of the Elotec Confire Fire Detection and Alarm System can be configured using the Elotec Confire Tool.

You will need:

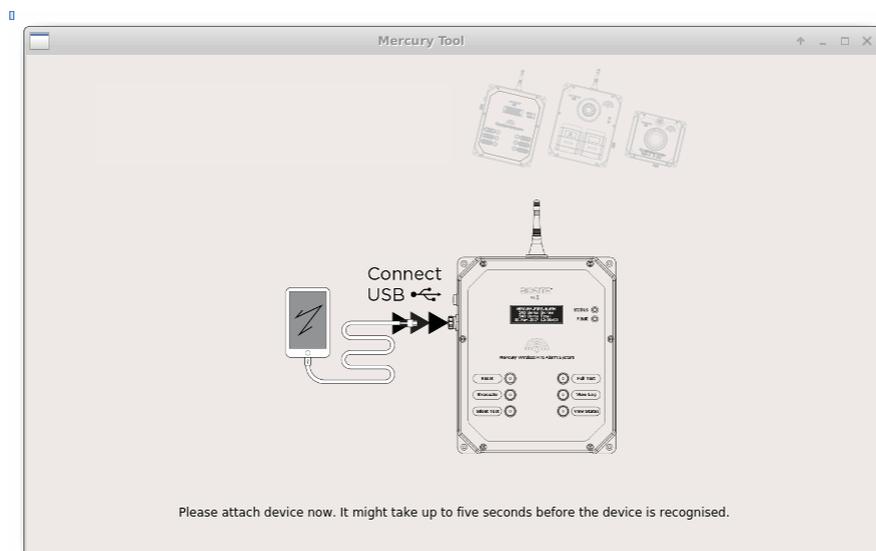
1. USB-A to Mini-B Cable
2. PC running Elotec Confire Tool

NOTE: Some minor variations may exist between Windows, Linux and Tablet versions of the software. The Linux version is shown in these instructions.

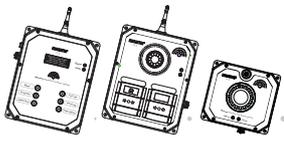
6.2.1 Connecting

Instructions:

1. Run the Elotec Confire Tool.



2. Connect the PC to the Elotec Confire Call Point or Detector using the USB Mini-B cable.



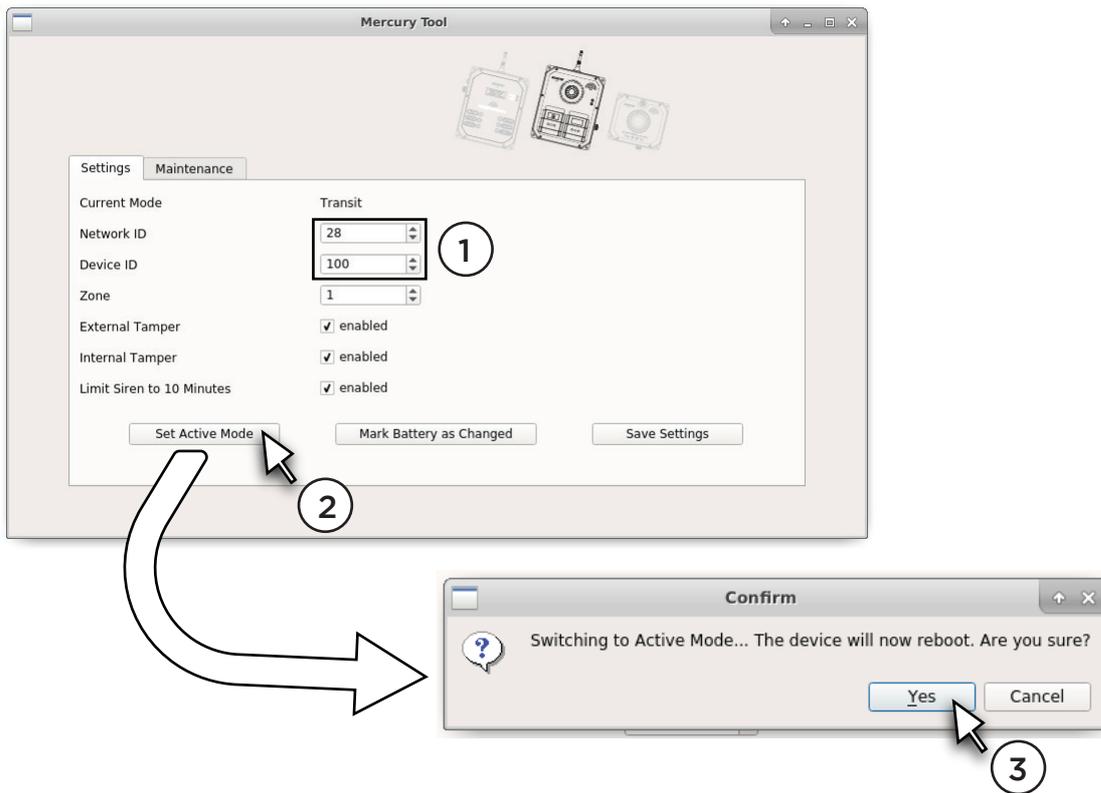
6.2.2 Setting Active Mode

Units will normally be delivered in a low power consumption “Transit” mode. In order to use the unit in the System, they must be activated.

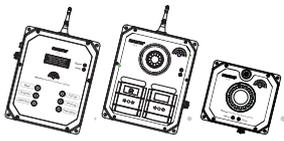
CAUTION: CONFIRM SETTINGS BEFORE SETTING ACTIVE. Before setting a unit active, check the Network ID, and Device ID. Setting an incorrect value may interfere with other nearby networks.

Instructions:

1. In the “Settings” tab, check or set the Network ID and Device ID.
If the settings are changed, it is necessary to click the “Save Settings” button before proceeding.
2. In the “Settings” tab, click the “Set Active Mode” button.



3. At the dialog box, press “Yes”.
The unit will restart.

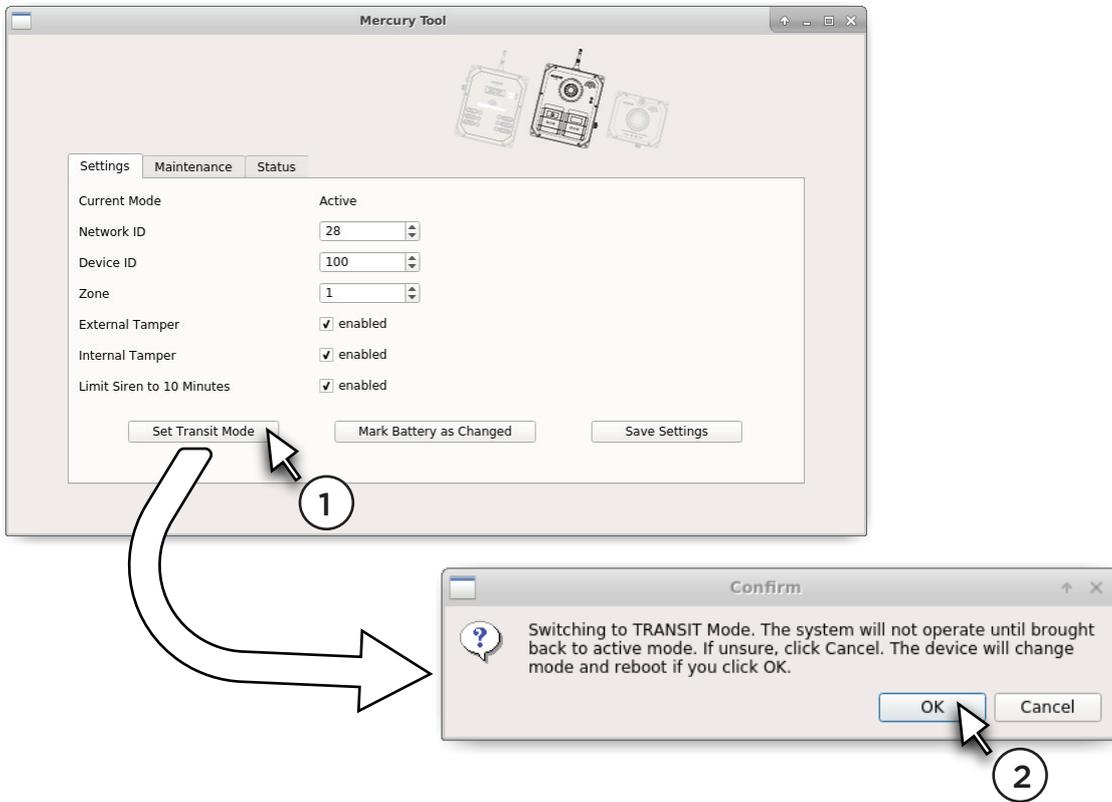


6.2.3 Setting Transit Mode

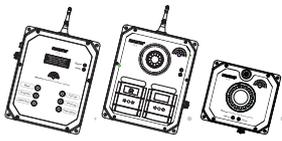
During long periods of inactivity (storage) or during transit, the unit should be placed into the low power consumption “transit” mode.

Instructions:

1. In the “Settings” tab, click “Set Transit Mode”.

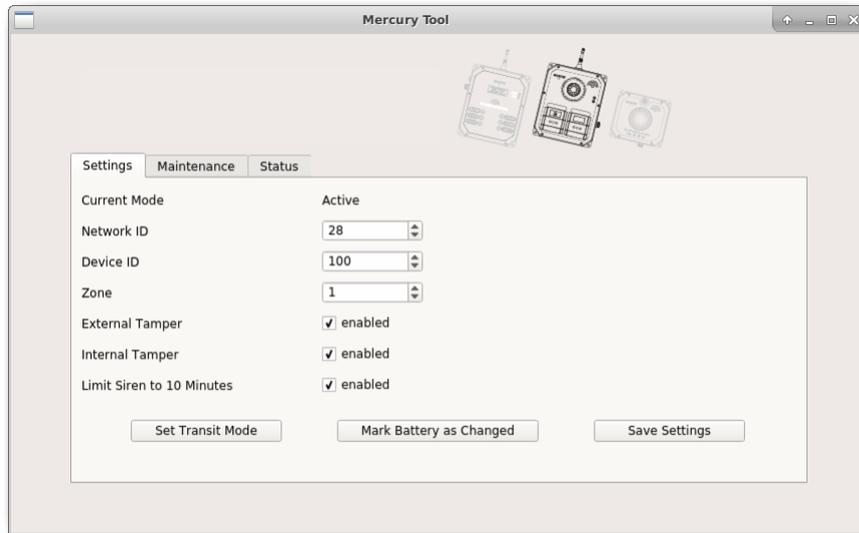


2. At the dialog box, press “Yes”
The unit will restart



6.2.4 Basic Settings

The basic settings allow the unit to be uniquely identified by its Network, Device ID and Zone. It is also possible to disable some other commonly used features.



Current Mode

Displays the unit's current mode:

Active – the unit will attempt to communicate with other units in the network.

Transit – the unit is in the low power consumption “transit” mode. Normal functions and controls are disabled until the unit is activated (see “Setting Active Mode”, page 68).

Network ID

Sets the Network ID in which the unit should communicate (1-65535).

In order to avoid interference with other Elotec Confire systems, the network ID must be unique within the radio range of the device. Consult Elotec for assistance when changing the Network ID.

Device ID

Sets the Device ID that the unit should use (1-240). This is the unit number that will be displayed on the Base Station in the event of a Call Point or detector activation.

This number must be unique within the Network.

Zone

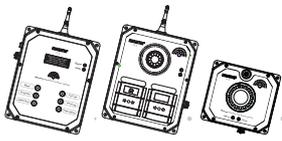
Sets the Device Zone ID that the unit should use (0-7). This is the zone number that will be displayed on the Base Station in the event of a Call Point or detector activation. It also affects how the alarm will be sounded – see “Zones”, page 20.

External Tamper*

When checked, the external tamper switch on the back of the case will be enabled. An audible alert will sound at Base Station (and the Call Point if applicable) to indicate that the tamper has been triggered. When un-checked, no alert is generated.



***NON-EN 54.** The external tamper switch is a requirement of EN 54. Switching off the external tamper is at the user's discretion.



Internal Tamper*

When checked, the internal tamper switch inside the case will be enabled. An audible alert will sound at Base Station (and the Call Point if applicable) to indicate that the tamper has been triggered. When un-checked, no alert is generated.



***NON-EN 54.** The internal tamper switch is a requirement of EN 54. Switching off the internal tamper is at the user's discretion.

Limit Siren to 10 Minutes*

When checked, the sounder will be silenced automatically after 10 minutes in order to avoid noise complaints in built-up or residential areas.

NOTE: The “Limit Siren to 10 Minutes” option must be configured on ALL Call Points individually!

Set Transit Mode

When in Active Mode, this button sets the unit into Transit Mode – see “*Setting Transit Mode*”, page 69.

Set Active Mode

Sets the unit into Transit Mode – see “*Setting Active Mode*”, page 68.

Mark Battery as Changed

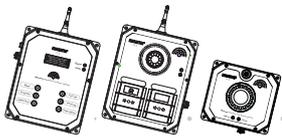
The internal memory stores the date that the battery packs were installed. Following replacement of the battery, clicking on the button will update the date stored in internal memory to the current date (month and year).

Save Settings

Press this button after updating of any settings on this page to store the values into the internal memory.

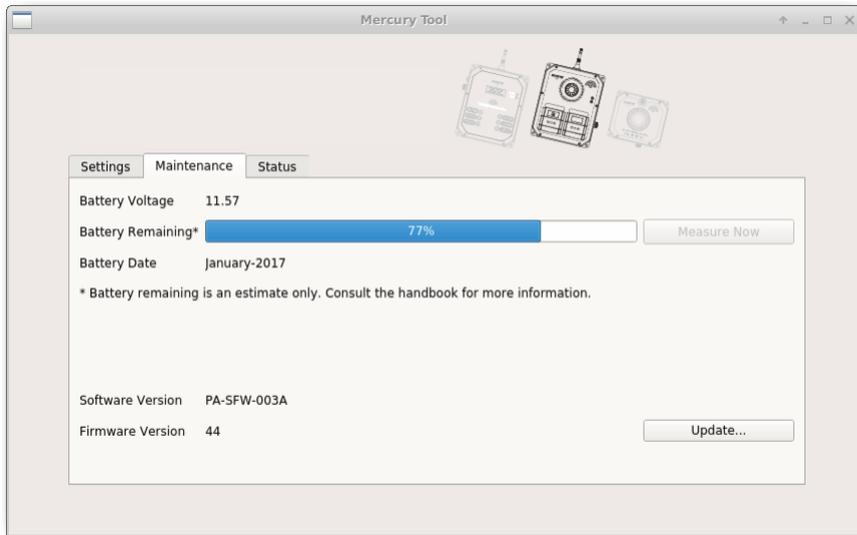
*Call point only feature.

CAUTION: TAKE CARE WHEN CONFIGURING DEVICE! Setting an incorrect Network ID, Device ID or Channel may prevent the device from connecting to the system, may cause interference within the system or may cause the device to connect to, or interfere with the operation of, another nearby system.



6.2.4.1 Maintenance

The Maintenance window provides information that may be useful to the installer or maintainer and can assist with problem solving.



Battery Voltage

Displays the battery voltage. The battery voltage is measured during a radio transmission to give a more realistic figure.

A low battery alert will be displayed at the Base Station.

Battery Remaining

The battery remaining bar estimates the remaining charge in the battery packs. In order to avoid replacing batteries on site, the battery level should be checked before deploying a unit to site.

Measure Now*

Battery voltage measurement in transit mode will not be realistic because there are no radio transmissions. Pressing the “Measure Now” button will force the unit to turn on the radio and transmit a packet so that the battery voltage can be measured.

Battery Date

Displays the date that the battery packs were installed.

Software Version

Displays the current version of the Elotec Confire Tool.

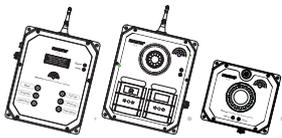
Firmware Version

Displays the current version of the Elotec Confire unit firmware.

Update...

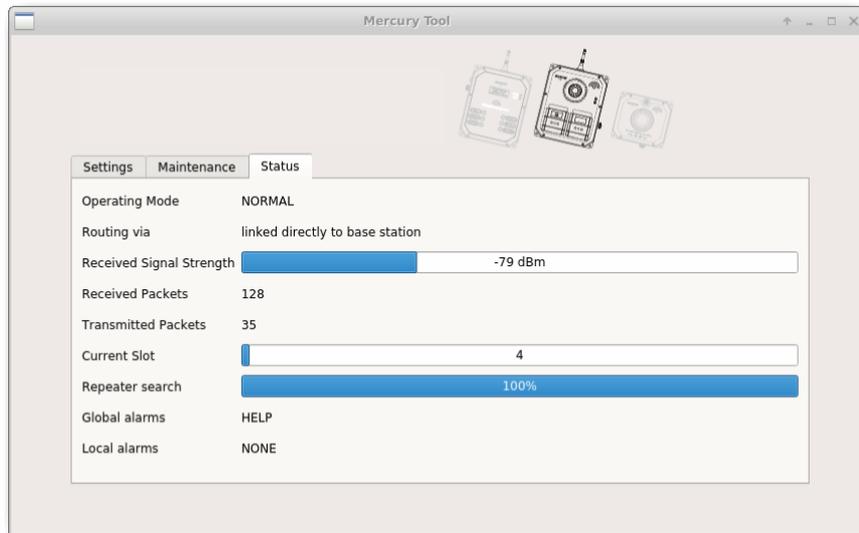
Allows the unit firmware to be updated – authorised service engineer use only.

*Transit mode only.



6.2.4.2 Device Status

The Device Status window provides information that may be useful to the installer or maintainer and can assist with problem solving. The Device Status window is not available in Transit mode.



Operating Mode

Displays the operating mode of the unit:

NORMAL – the unit has joined the network and is communicating normally;

JOIN – the unit is joining the network;

Routing Via

Displays the node via which the unit is connected to the Base Station. If the unit can't communicate with the Base Station directly, this will be the unit number of the mesh network node which provides the connection.

Received Signal Strength

Displays the received signal strength (in dBm) of the last message received from the Base Station or the mesh network node identified in "Routing Via". A signal strength less than -100 dBm is considered low and some remedial work may be required – see "Placement of", page 18.

Received Packets

Displays a counter of the number of packets received. The frequency at which packets are received will vary according to the network configuration – but a poor Received Signal Strength and a low Received Packets count may indicate network issues – see "Placement of", page 18.

Transmitted Packets

Displays a counter of the number of transmitted packets.

Current Slot

For service engineer information only.

Repeater Search

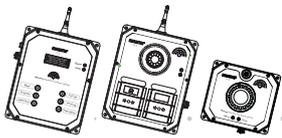
For service engineer information only.

Global Alarms

Displays any global alarms from this unit such as FIRE (fire Call Point or detector), HELP (first aid Call Point) or NEEDS RESET (Call Point or detector triggered and needs to be reset).

Local Alarms

Displays any local alarms for this unit such as LOW BATTERY.



6.3 Determining Radio Network Performance

Using the Elotec Confire tool, it is possible to see the received power at both ends of the link:

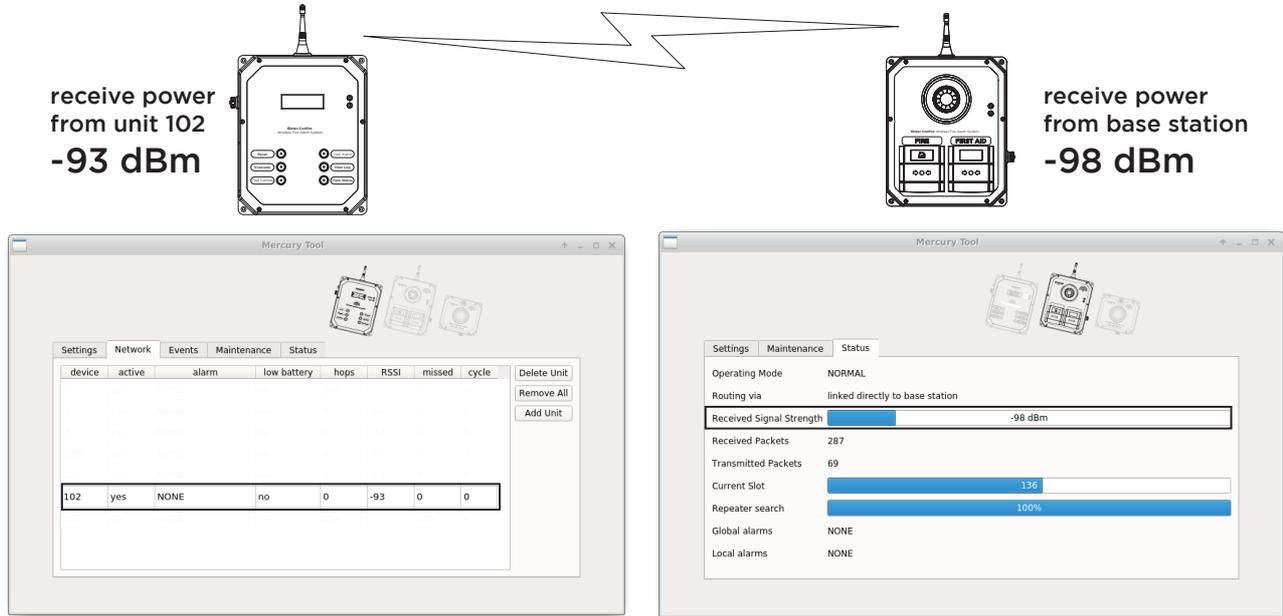


Figure 41 - Power received at the Base Station (left) and Call Point (right)

It is possible to see in the example above that unit 102 is connected to the Base Station, but has low signal strength. Conditions change over time – especially in the changing landscape of a construction site – so it is possible that the connection to the Base Station could become intermittent or fail later. It may be possible to place the unit closer to the Base Station, or in a location with less interference. Otherwise, the installer may have to intervene by adding additional units to the network.

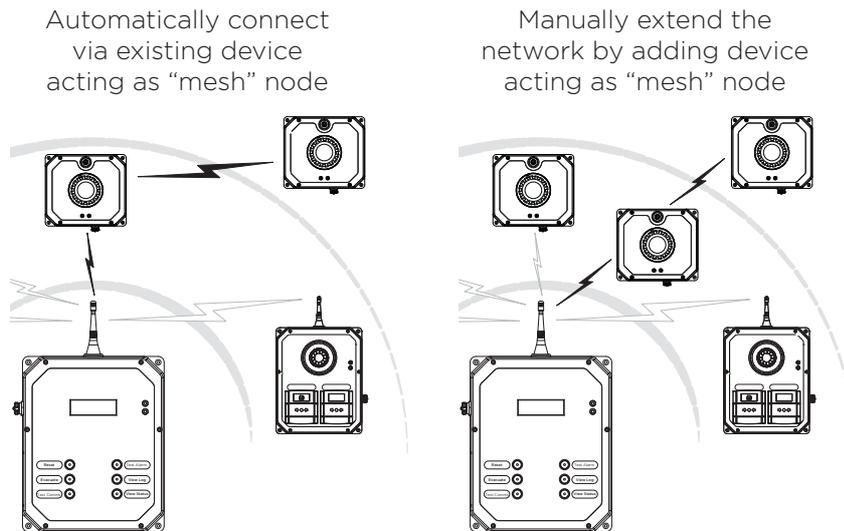
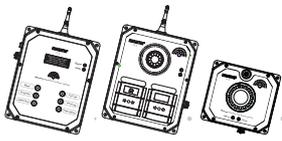


Figure 42 - Extending range automatically or manually



If the Call Point detects that messages from the Base Station are missing or if no direct connection is possible, it will look for a better connection to the Base Station – such as through an existing or newly added “intermediate” mesh network node. No user intervention is required.

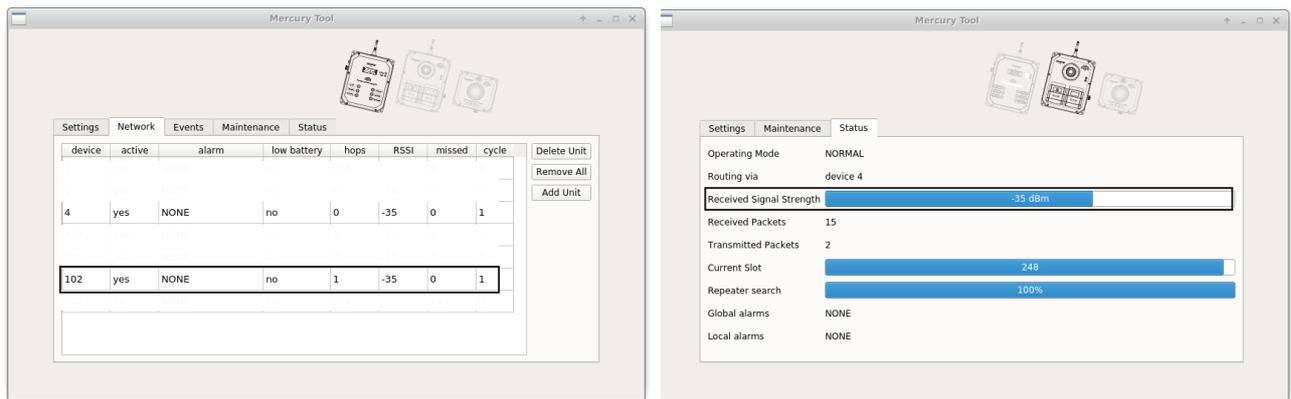
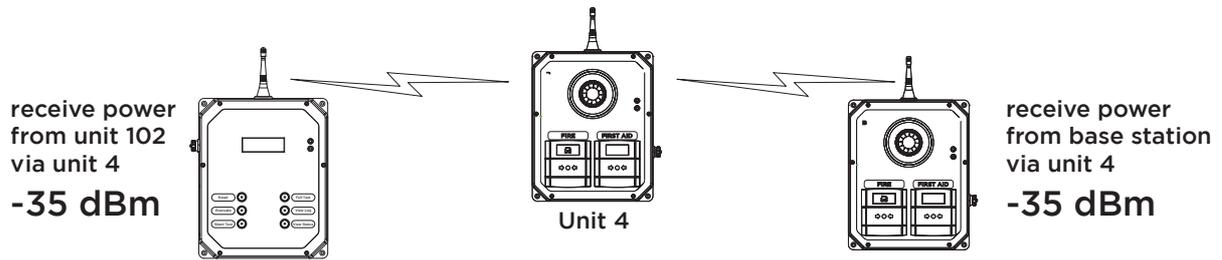
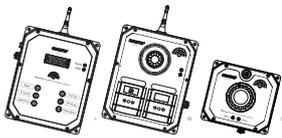


Figure 43 - Power received at the Base Station (left) and Call Point (right) via intermediate node

The unit will continue to relay its messages through the intermediate node until either:

- Messages from the intermediate node are missed; or
- The unit is reset and a stronger signal from another node is found;



7 Specifications

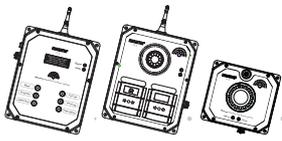
7.1 Elotec Confire Base Station

 0359
Elotec AS, Søndre Industrivegen 3 N-7340 Oppdal Norway
<p>EN 54-25 Component using RF Links for fire detection and fire alarm systems in and around buildings.</p> <p>EN 54-18 Input / output device for fire detection and fire alarm systems in and around buildings.</p> <p>Technical Data: held by the manufacturer.</p>

7.1.1 Specification

Radio Communication

Operating Frequency (MHz)	869.425 – 869.625
Channel Spacing (kHz)	25
Transmitter Power (mW)	> 400
Duty Cycle (%)	< 1
Transmission Protocol	Elotec proprietary
Network Type	Radio mesh
Compatibility	Only compatible with Elotec Confire Series only " 1
Theoretical Range (km)	(real range will vary according to site conditions).



Network Configuration

Max. Networks	65534
Devices Per Network	Up to 240
Fire Alarm Zones	Up to 8 ¹

External Power Supply (mains)

Elotec Replacement Part	CONF-TRF
No Power Supply	External Power Supply
Input Voltage	Mains 230 V AC, 50/60 Hz
Output Voltage (V)	12 V DC nominal (to Base Station)

The supplied power supply has been fully tested for use with the base station, but the use of this supply means that your installation will not comply with the requirements of section 5.3.1 of EN54-25:2008. An EN54-4 compliant power supply is available from Elotec (part no. CONF-TRF) – see Base Station Features, Page 25 of this handbook.

External (DC) Input to Base Station

Input Voltage (V) *	10 – 14 V DC (12 V DC nominal)
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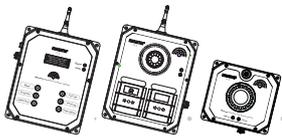
*** CAUTION!** Always use the provided power supply. Use of an unapproved power supply may adversely affect the unit performance.

External Power Supply (mains)

Power Supply	External Power Supply
Input Voltage	Mains 230 V AC, 50/60 Hz
Current Consumption (mA)	

Internal Power Supply (back up battery)

Power Supply	Internal batteries
Voltage Range (V)	9-19 V DC (18 V DC nominal)
Battery Type	Alkaline (non-rechargeable)
Operation time with mains lost	2 weeks



Sounder and Display

Sounder	Piezo-electric buzzer (3.6 kHz nom.), > 90 dB (A) (0.1m)
Audible Alerts	Fire Alarm (Continuous) First Aid Alarm (Intermittent) Unit Tamper (Intermittent)
Visual Indicators	4 line OLED display provides: System Status Unit Status Alarm Messages Event Log (20 events stored) Status LED (green) Fault LED (red)

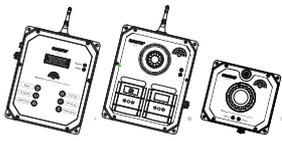
Physical Properties

Dimensions (mm)	240 W x 387.5 H x 81 D (inc. Antenna)
Antenna Length (mm)	90 (approx.)
Mass (kg)	2.75 (approx.)
Operating Environment	-25 to +50 °C ≤ 95% RH
IP Rating	Indoor use only.
Mounting	Wall-mounted
Dimensions (mm)	240 W x 387.5 H x 81 D (inc. Antenna)

Tamper Detection

Tamper	External (rear) Internal (removal of cover)
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¹Units in Zone 0 will cause the evacuation of all zones irrespective of the configuration of the other zones.



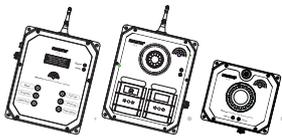
7.2 Elotec Confire Call Point

 0359
Elotec AS, Søndre Industrivegen 3 N-7340 Oppdal Norway
<p>EN 54-25 Component using RF Links for fire detection and fire alarm systems in and around buildings.</p> <p>EN 54-11 Manual Call Points for fire detection and fire alarm systems in and around buildings.</p> <p>EN 54-3 Alarm devices - Sounder Type B: For outdoor use.</p> <p>Technical Data: held by the manufacturer.</p>

7.2.1 Specification

Radio Communication

Operating Frequency (MHz)	869.425 – 869.625
Channel Spacing (kHz)	25
Transmitter Power (mW)	> 400
Duty Cycle (%)	< 1
Transmission Protocol	Elotec proprietary
Network Type	Radio mesh
Compatibility	Only compatible with Elotec Confire Series only " 1
Theoretical Range (km)	(real range will vary according to site conditions)



Network Configuration

Max. Networks	65534
Devices Per Network	Up to 240
Fire Alarm Zones	Up to 8 ¹

Power Supply

Power Supply	Internal batteries
Battery Type	Alkaline (non-rechargeable)
Battery Service Life	≥ 3 years, including self-discharge
Voltage Range (V)	10 * to 13
Battery Capacity (Ah)	17, under typical load conditions
Current Consumption (mA)	0.2 approx.

* the call point will continue to operate down to 8 V – however, the low battery warning will be raised.

Audible and Visual Alerts

Minimum Sound output (dB(A) at 1 metre) *

Position (°)	Outdoor Mode		Indoor Mode	
	Horiz. Plane	Vertical Plane	Horiz. Plane	Vertical Plane
15	84.6	87.7	76.4	78.6
45	91.2	91.0	82.3	82.0
75	97.1	96.1	88.0	87.1
105	96.7	96.8	87.6	87.7
135	92.7	90.3	83.5	81.5
165	89.7	84.6	80.4	75.8

* when measured in accordance with EN54-3 Clause 5.3

Audible Alerts

Fire Alarm (High pitch sweep, 2.9 kHz – 4 kHz approx.)

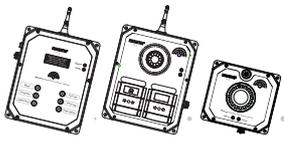
First Aid Alarm (Buzzer tone, 2 kHz – 4.2 kHz approx.)

Visual Indicators

Fire Alarm (Red LED beacon)

Status ⓘ LED (green)

Fault ⚠ LED (red)



Functions

Fire Call Point	Manual Call Point (red) with resettable frangible element
First Aid Call Point	Manual Call Point (green) with resettable frangible element
Tamper Switch	External (rear) and Internal to casing

Physical Properties

Dimensions (mm)	240 W x 387.5 H x 81 D (inc. Antenna)
Antenna Length (mm)	90 (approx.)
Mass (kg)	2.75 (approx.)
Operating Environment	-25 to +50 °C ≤ 95% RH
IP Rating	IP65 Indoor or Outdoor use.
Mounting	Wall-mounted



7.3 Elotec Confire Smoke Detector

 0359
Elotec AS, Søndre Industrivegen 3 N-7340 Oppdal Norway
<p>EN 54-25 Component using RF Links for fire detection and fire alarm systems in and around buildings.</p> <p>EN 54-7 Point type smoke detector (scattered light) for fire detection and fire alarm systems in and around buildings.</p> <p>Technical Data: held by the manufacturer.</p>

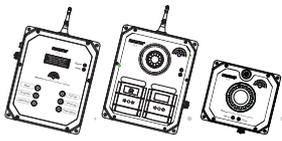
7.3.1 Specification

Radio Communication

Operating Frequency (MHz)	869.425 – 869.625
Channel Spacing (kHz)	25
Transmitter Power (mW)	> 400
Duty Cycle (%)	< 1
Transmission Protocol	Elotec proprietary
Network Type	Radio mesh
Compatibility	Only compatible with Elotec Confire Series only " 1
Theoretical Range (km)	(real range will vary according to site conditions)

Network Configuration

Max. Networks	65534
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Devices Per Network	Up to 240
Fire Alarm Zones	Up to 8 ¹

Power Supply

Power Supply	Internal batteries
Battery Type	Alkaline (non-rechargeable)
Battery Service Life	≥ 3 years, including self-discharge
Voltage Range (V)	8 to 13
Battery Capacity (Ah)	17, under typical load conditions
Current Consumption (mA)	0.2 approx.

Audible and Visual Alerts

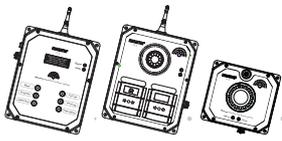
Visual Indicators	Fire Alarm (Red LED beacon) Status ⓘ LED (green) Fault ⚠ LED (red)
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Functions

Tamper Switch	External (rear) and Internal to casing.
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Detector Head

Detector Type:	Point type smoke detector for fire detection and alarm system for buildings.
Detection Principle:	Photo-electric detection of light scattered in a forward direction by smoke particles.
Chamber Configuration:	Horizontal optical bench housing an infra-red emitter and sensor arranged radially to detect forward scattered light.
Sensor:	Silicon PIN photo diode
Emitter:	GaAs Infra-red light emitting diode
Sampling Frequency:	0.333 Hz
Confirmation Frequency:	0.5 Hz
Number of Consecutive Sensed Alarm Signals Needed to Trigger	3



Detector Alarm:

Physical Properties

Dimensions (mm)	235 W x 210 H x 151.25 D (inc. Antenna)
Antenna Length (mm)	90 (approx.)
Mass (kg)	2.3 (approx.)
Operating Environment	-25 to +50 °C ≤ 95% RH
IP Rating	Not applicable, indoor use only
Mounting	Ceiling mounted BS 5839 gives guidance for placement of the Smoke Detector for acceptable coverage and effectiveness of the detector



7.4 Elotec Confire Heat Detector

 0359
Elotec AS, Søndre Industrivegen 3 N-7340 Oppdal Norway
<p>EN 54-25 Component using RF Links for fire detection and fire alarm systems in and around buildings.</p> <p>EN 54-5 Heat detector for fire detection and fire alarm systems in and around buildings.</p> <p>Technical Data: held by the manufacturer.</p>

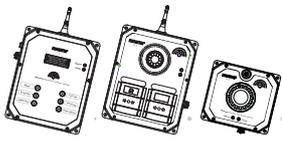
7.4.1 Specification

Radio Communication

Operating Frequency (MHz)	869.425 – 869.625
Channel Spacing (kHz)	25
Transmitter Power (mW)	> 400
Duty Cycle (%)	< 1
Transmission Protocol	Elotec proprietary
Network Type	Radio mesh
Compatibility	Only compatible with Elotec Confire Series only " 1
Theoretical Range (km)	(real range will vary according to site conditions).

Network Configuration

Max. Networks	65534
----------------------	-------



Devices Per Network	Up to 240
Fire Alarm Zones	Up to 8 ¹

Power Supply

Power Supply	Internal batteries
Battery Type	Alkaline (non-rechargeable)
Battery Service Life	≥ 3 years, including self-discharge 8
Voltage Range (V)	to 13
Battery Capacity (Ah)	17, under typical load conditions 0.2
Current Consumption (mA)	approx.

Audible and Visual Alerts

Visual Indicators	Fire Alarm (Red LED beacon)
	Status ⓘ LED (green)
	Fault ⚠ LED (red)

Functions

Tamper Switch	External (rear) and Internal to casing
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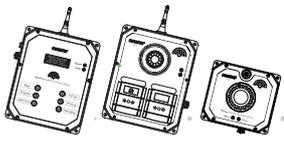
Detector Head Type A1R (CONF-HEAT)

Detector Type:	Point type heat detector for fire detection and alarm system for buildings
Detection Principle:	Thermistor
EN54-5 Detector Class	A1R (Rate of rise) Max application temperature 50 °C Max static response temperature 65 °C



Physical Properties

Dimensions (mm)	235 W x 210 H x 151.25 D (inc. Antenna)
Antenna Length (mm)	90 (approx.)
Mass (kg)	2.3 (approx.)
Operating Environment	-25 to +50 °C ≤ 95% RH
IP Rating	Not applicable, indoor use only
Mounting	Ceiling mounted BS 5839 gives guidance for placement of the detector for acceptable coverage and effectiveness of the detector



8 APPENDIX

8.1 Appendix A Base Stations Display States

8.1.1 Normal Operation

