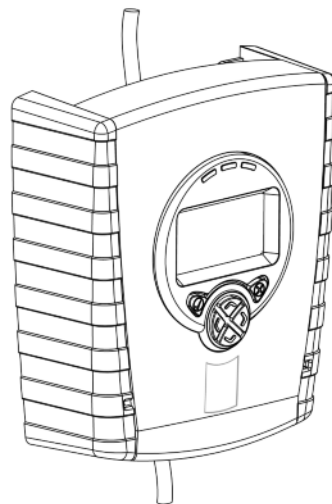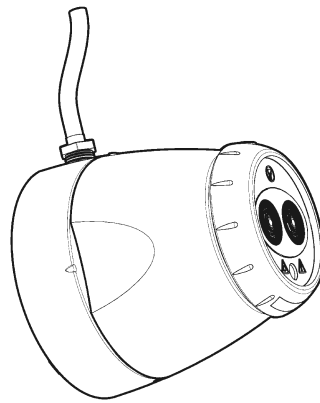# Motorised Infrared
# Optical Beam Smoke Detector

Additional
## Information

(EN)

1. Multiple Zone Wiring

When using more than one System Controller on a single zone of a conventional Fire Control Panel (FCP), it is important to choose the correct method of wiring. Incorrect wiring may result in a Controller isolating subsequent devices on that zone if it enters a Fault condition, and may prevent these subsequent devices signalling a Fire condition back to the FCP.

If the FCP monitors for point detector removal, it is possible to use the following wiring diagrams which use diodes to provide zone continuity in the event of a Fault state on any Controller.

Two Detectors connected to Controller:
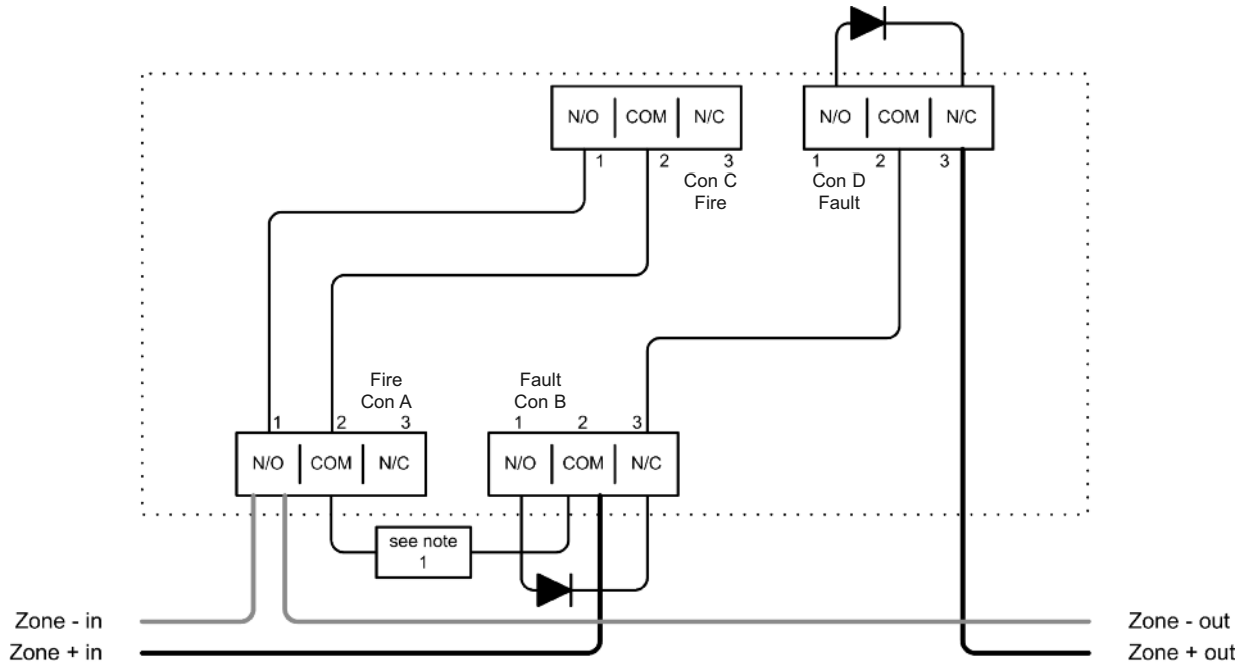
Single Detector connected to Controller on "Det 1":
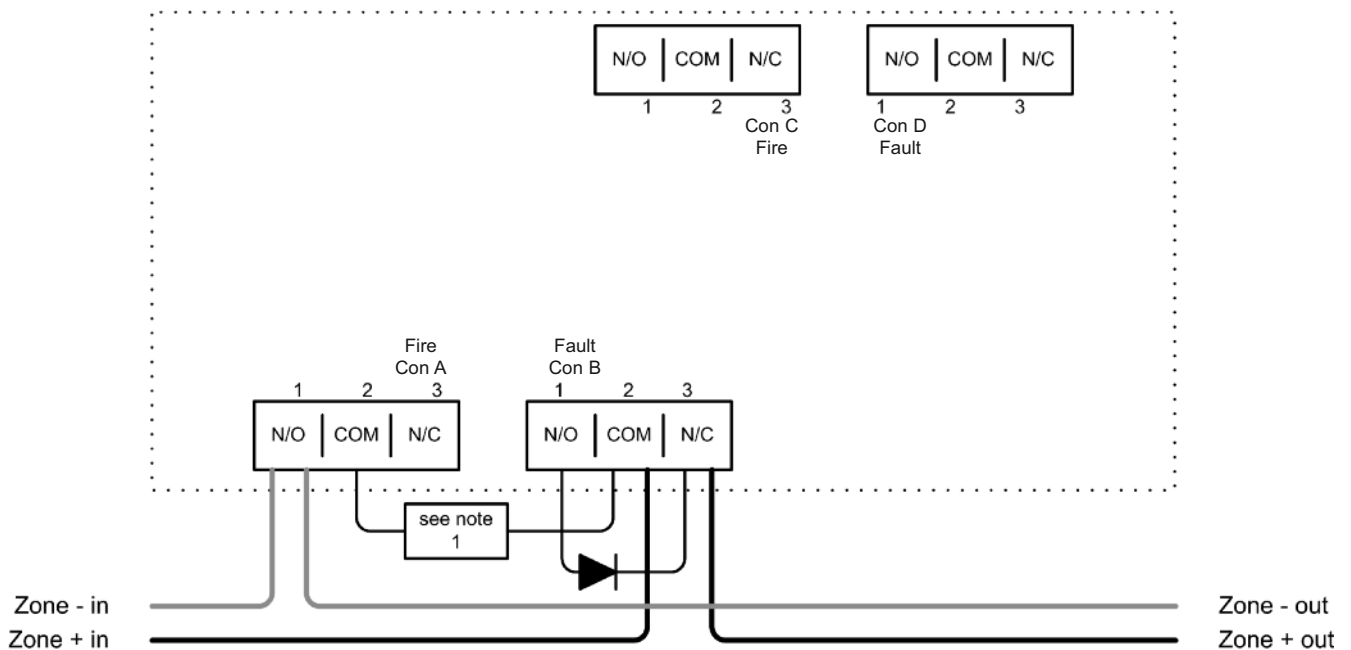
Note 1 – This component is the Fire Resistor. Its value is specified by the FCP manufacturer, and is not supplied with the System Controller. For U.S. installations it is typically a short circuit.

Note 2 – Recommended diode type: Schottky, 60Volt, 1Amp; must be UL listed for installations meeting NFPA72.

1. Multiple Zone Wiring (continued)

If the FCP does not monitor for detector removal, it is recommended that the following wiring diagram be used. For installations conforming to UL268 and NFPA72, the following diagram MUST be used when wiring multiple Controllers onto one zone.
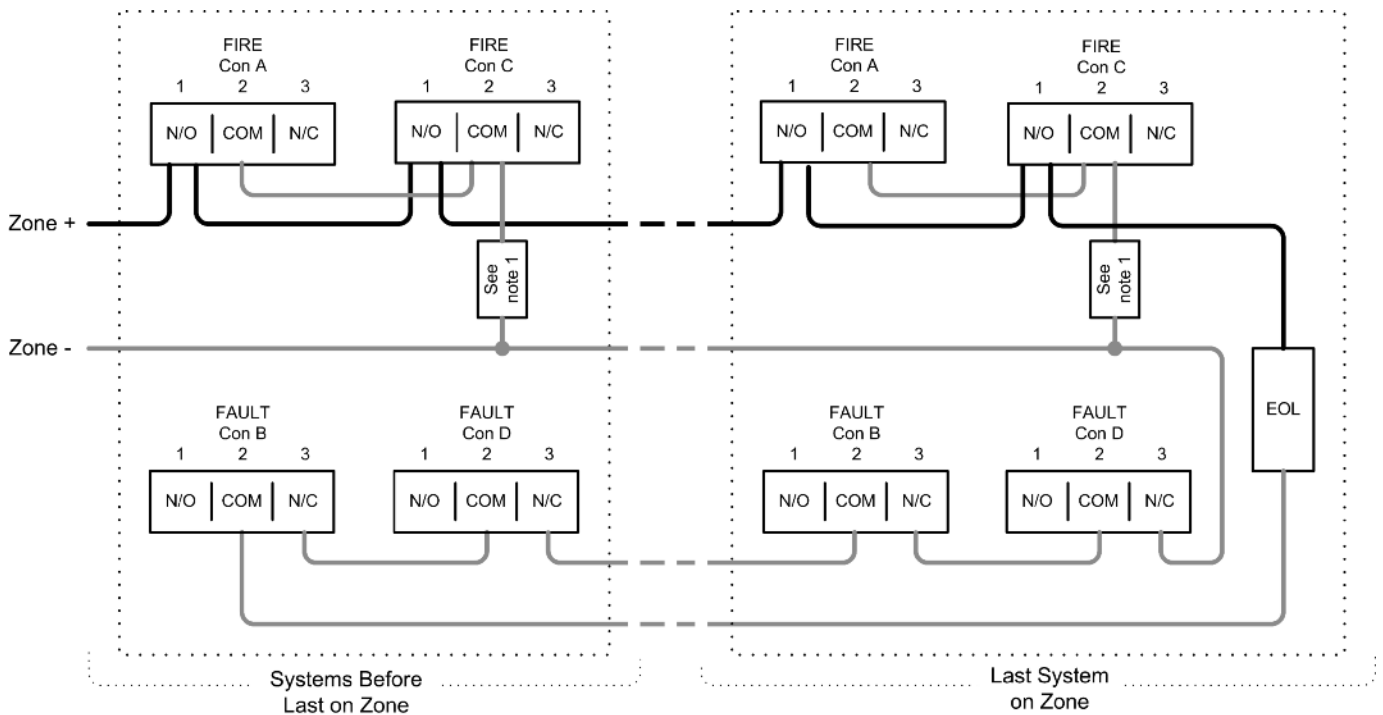

Note 1 – This component is the Fire Resistor. Its value is specified by the FCP manufacturer, and is not supplied with the System Controller. For U.S. installations it is typically a short circuit.

EOL – End of Line component. This is supplied with the FCP, and not supplied with the System Controller.
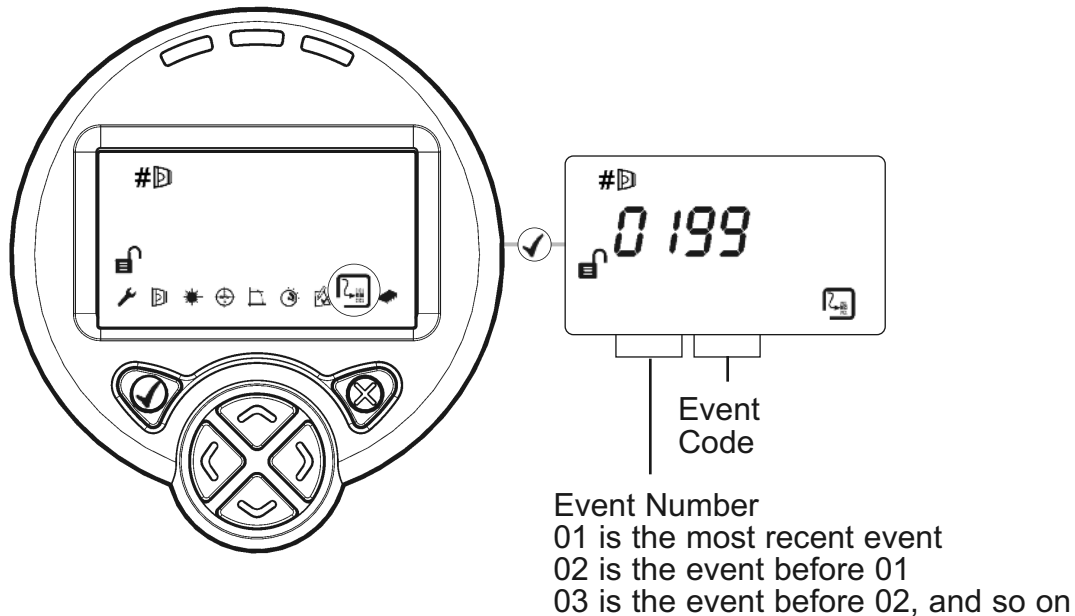
Do NOT wire to any unused relay pairs.

Con A and Con B are the relay outputs for Detector 1; Con C and Con D are the relay outputs for Detector 2.

2. Event Logger

The System Controller contains a logging function which will store information for the most recent 50 events on each Detector.

To access the event log, press tick on the Event Logger icon when the relevant detector is highlighted:


Event Code

Event Number
01 is the most recent event
02 is the event before 01
03 is the event before 02, and so on

For each Fire or Fault activation, the controller will store:

- The event code – This is the same as the error code (E-__) that would be displayed during the Fault, or one of the following:

  - 99 - Log erased
  - 98 - Power cycle
  - 97 - Fire Detected
  - 96 - Remote Fire Test initiated
  - 95 - AUTO initiated
  - 94 - LASER activated
  - 93 - 'Home' initiated

- The elapsed time since the event occurred
- The duration of the event
- The signal strength when the event occurred (if applicable)
- The AGC value when the event occurred (if applicable)

If there have been power-cycle events on the controller, all timing information will be lost for those events that occurred prior to the most recent of the power-cycles.

To erase and restart the event logger, press and hold 'left' and 'right' keys together when displaying any of the event log entries. Press 'tick' when prompted by 'SurE'.
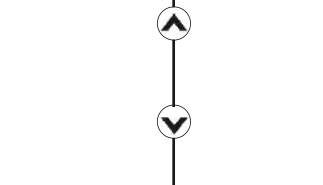
2. Event Logger (continued)

#🔊 0301

#🔊 0298

#🔊 0199
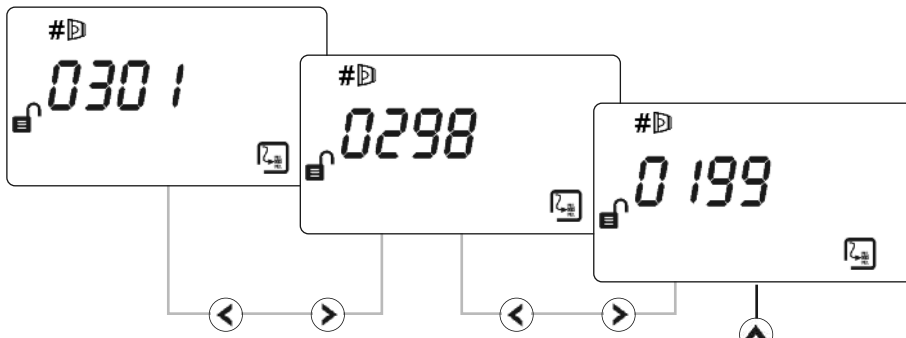
Press left to access older events, and right to access newer events. When the relevant event is selected, press down to access further information about the event.

#🔊 14d
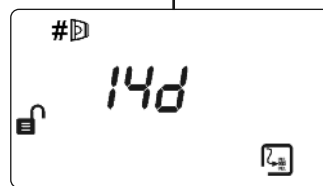
Time elapsed since event started. '—' will be displayed if the event occurred prior to the most recent power cycle.

#🔊 L 15⁻

Duration of event. '—' will be displayed if the event is still occurring, or if a power cycle occurred while the event was in progress, or if there is no duration associated with the event type (e.g. power-on)

#🔊 17 %ᴿˣ
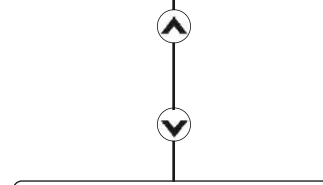
Signal strength when the event occurred. If the signal strength could not be read during the event '—' will be displayed.

#🔊 5
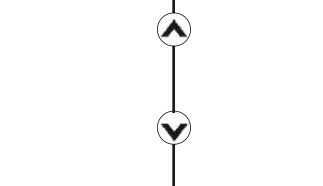
AGC value when the event occurred. If the AGC value could not be read during the event '—' will be displayed.

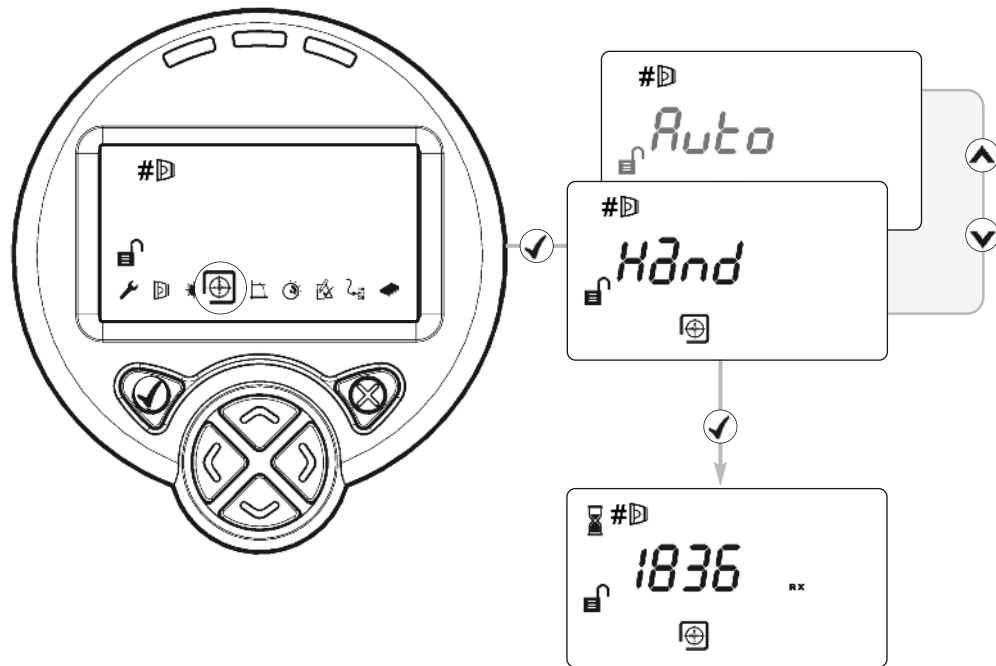# 3. Troubleshooting - LASER not visible

If it is not possible to see the LASER because of the installation environment (for example, if you cannot see the Reflector from the System Controller or there is high ambient light) then use 'Hand' Alignment. This option displays the signal strength value returned by the Detector, and allows the user to move the beam

1. Start 'Auto' Alignment and press ✖ after two seconds to exit. (this will maximise infrared power)
2. Select 'Hand' alignment
3. Use ⧀ ⧁ ⧾ ⧿ to steer the beam until the signal strength is above 800. There is no auto-repeat function on any key. To move the motor in any given direction more than once, press the key multiple times
4. Cover the Reflector. If the Signal Strength does not drop by more than half, the beam is not aligned to the Reflector, so repeat Step 3
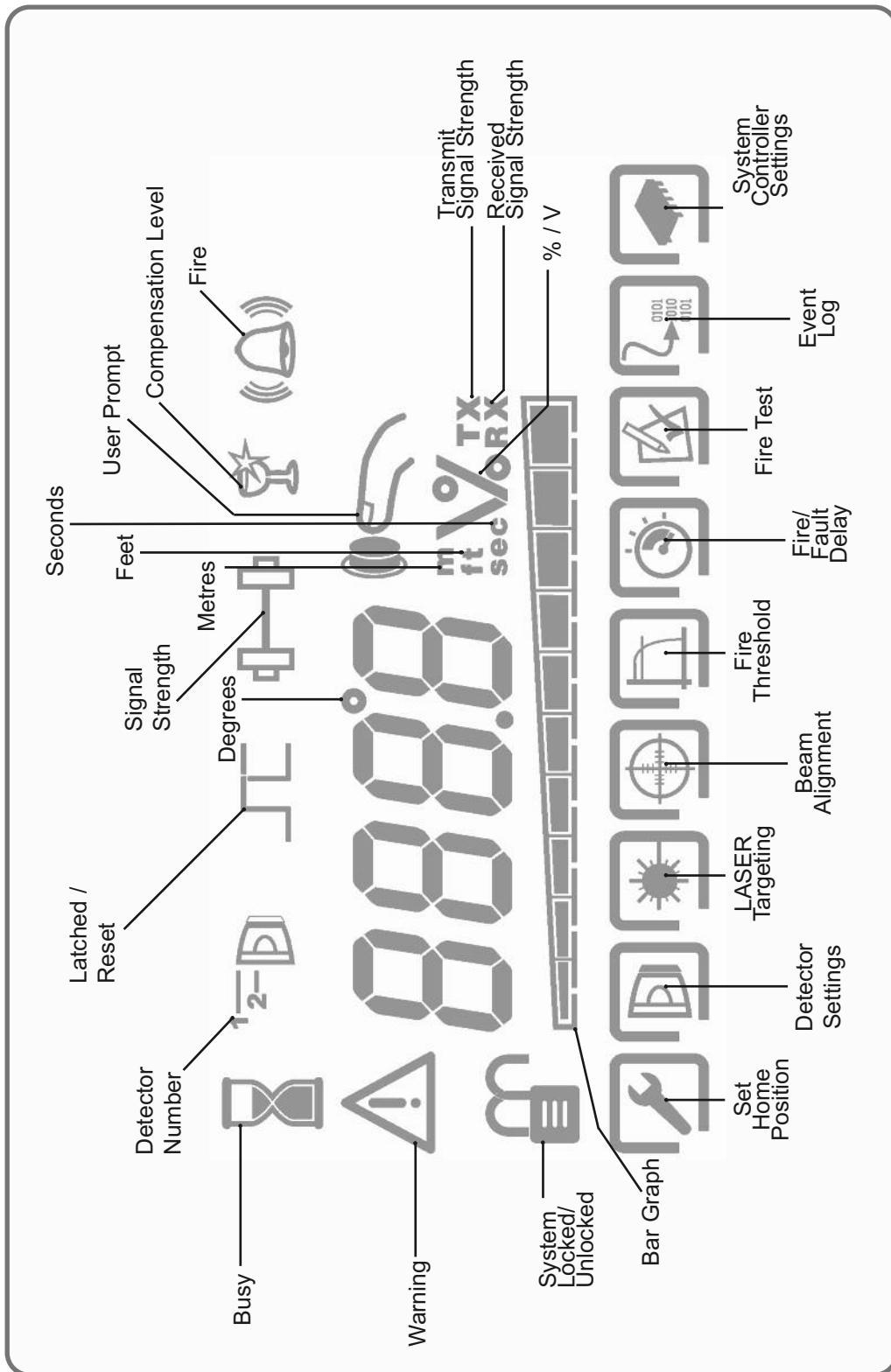5. Perform 'Auto' alignment, followed by 'Set'

4. Troubleshooting - HOME
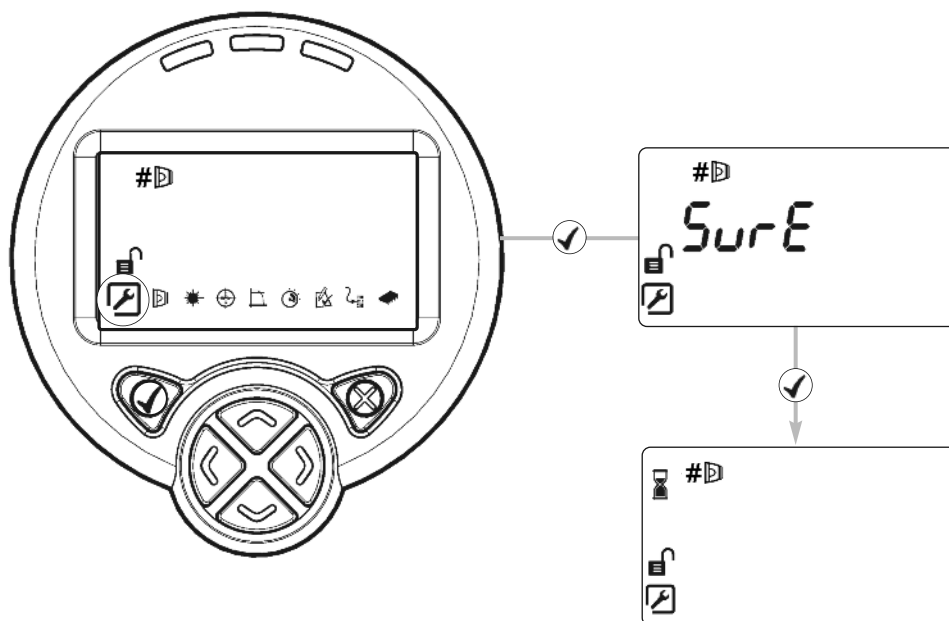
If it is not known where the beam is pointing, use Home Position to automatically steer the infrared beam to approximately the centre of its range of movement.

- Press ✔ or ✘ to exit this function
- This will take up to 3 minutes to complete
- When complete the display will return to the Engineering Menu

5. Display and Indicators - LCD Icon Layout

- Transmit Signal Strength
- Received Signal Strength
- % / V
- Compensation Level
- Fire
- User Prompt
- Seconds
- Feet
- Metres
- Signal Strength
- Degrees
- Latched / Reset
- Detector Number
- Busy
- Warning
- System Locked/ Unlocked
- Bar Graph
- Set Home Position
- Detector Settings
- LASER Targeting
- Beam Alignment
- Fire Threshold
- Fire/ Fault Delay
- Fire Test
- Event Log
- System Controller Settings

Detector

Indicator flashes every 10 seconds.

NORMAL: GREEN
FAULT: YELLOW
FIRE: RED

System Controller

Indicators 1 to 2 show status for Detectors 1 to 2:

NORMAL: No flash
FAULT: YELLOW
FIRE: RED

Indicator 3 flashes GREEN to indicate NORMAL System Controller status.
All indicators flash every 10 seconds.

7. Menu Layout - User Menu

Controller parameters

Power Mode
'Hi A' or 'Lo A'

System Controller Status

System Controller Software Version

Compensation Level

Received Signal Percentage

Fire Threshold

Fire Delay

Detector parameters

Detector Software Version

Detector Status

Distance
8—50m or 50—100m

Fault Delay
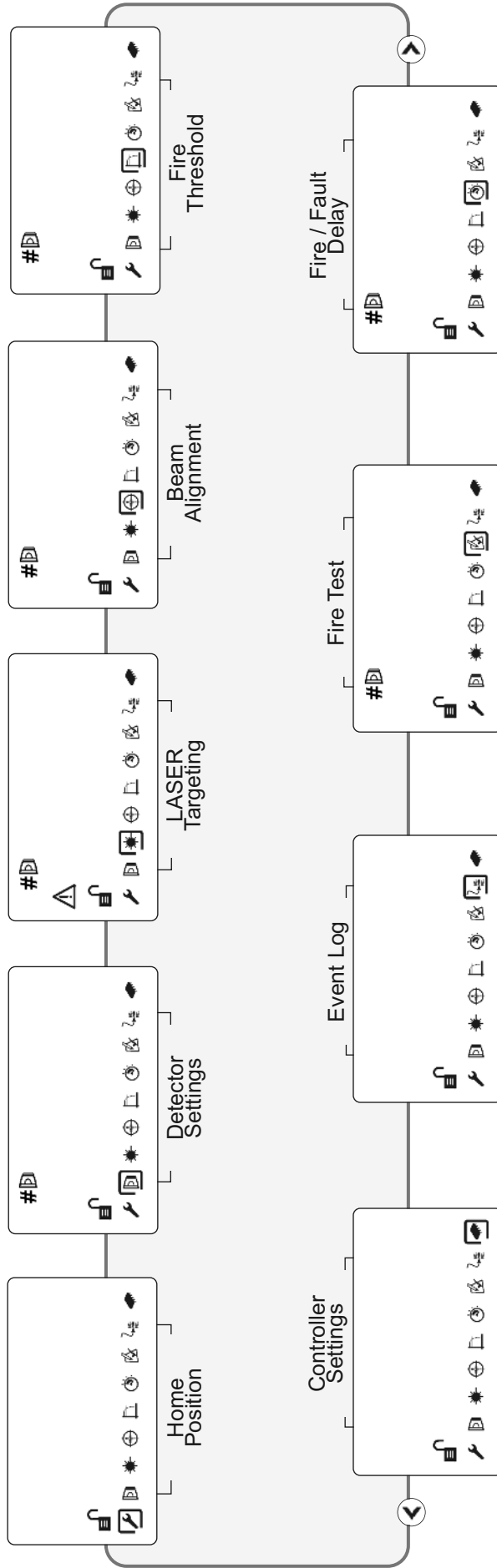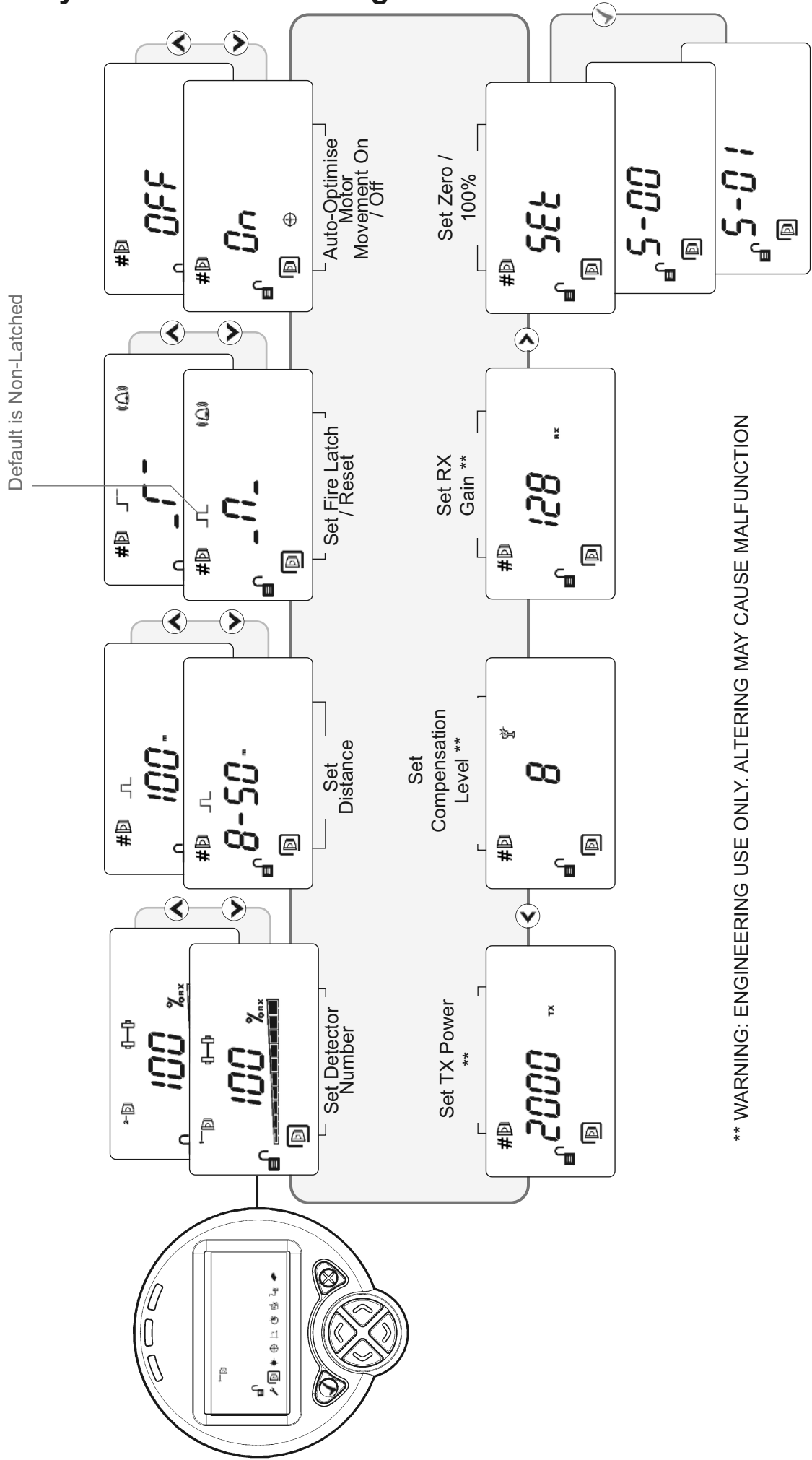
- Press ✓ in this menu to enter the Pass Code
- Press ✗ to put the system into Sleep

8. Menu Layout - Engineering Menu

- The Pass Code must be entered to access the Engineering Menu
- The menu is navigated by using ⊙ ⊙ keys to move the cursor.
- Items are selected by using ✓
- Pressing ✗ exits this menu and returns the system to a 'locked' state

9. Menu Layout - Detector Settings

Default is Non-Latched

OFF

On

Auto-Optimise
Motor
Movement On
/Off

Set Zero /
100%

SEt

S-00

S-01

Set Fire Latch
/Reset

Set RX
Gain **

128

Set
Distance

100"

8-50"

Set
Compensation
Level **

8

Set Detector
Number

100

100

Set TX Power
**

2000

** WARNING: ENGINEERING USE ONLY. ALTERING MAY CAUSE MALFUNCTION

10. System Controller Settings
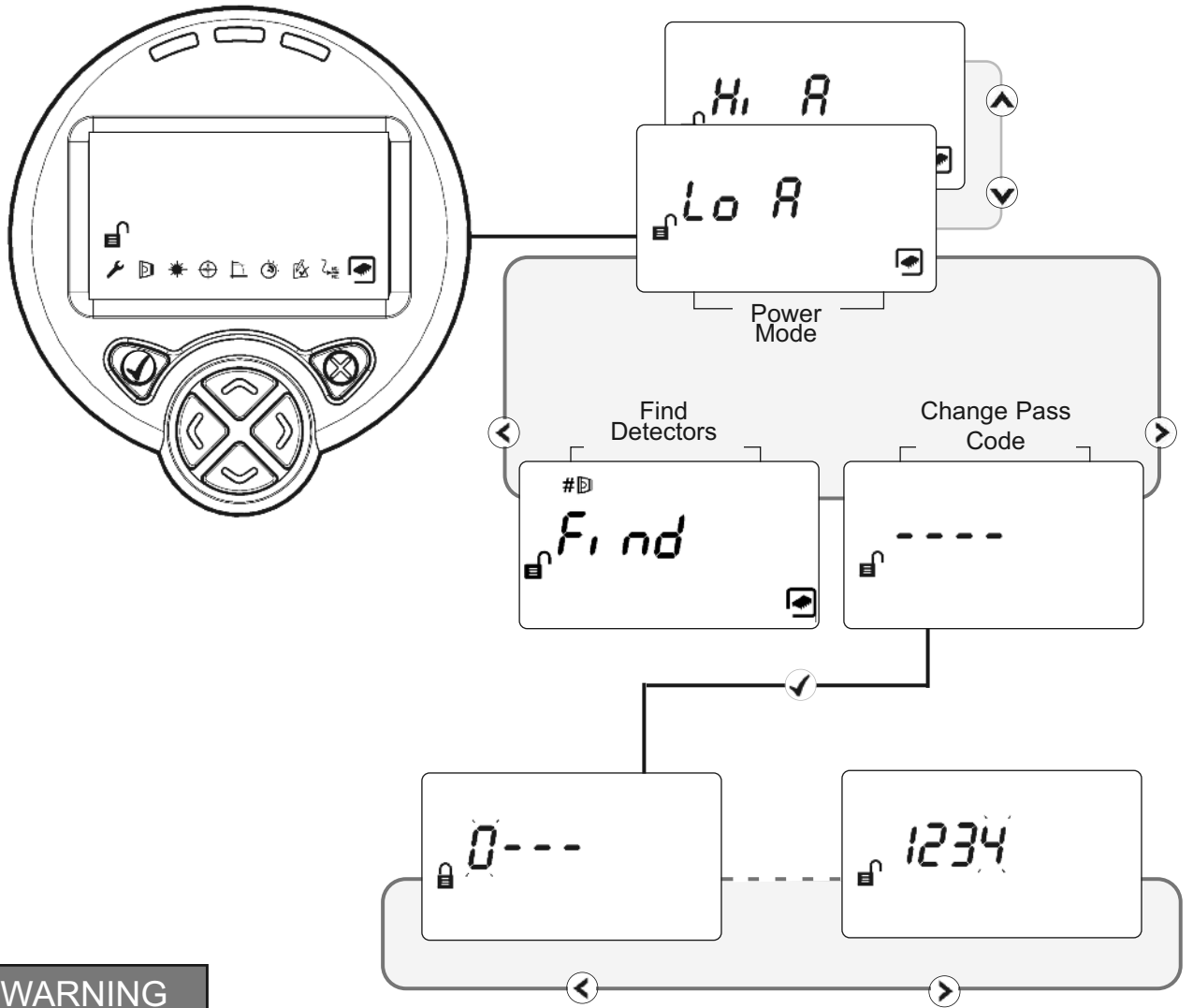
WARNING

Care must be taken when changing the Pass Code. If the code is lost, contact the manufacturer for Pass Code reset.

• **Change Pass Code**

Use ⓒ ⓓ to access each digit

Use ⓥ ⓐ to change the digit

Press ✓ to save the new Pass Code and return to the settings menu

Press ✗ to cancel the change and return to the Engineering menu

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