

Toolkit for

Reducing false alarms

from Automatic Fire Detection Systems

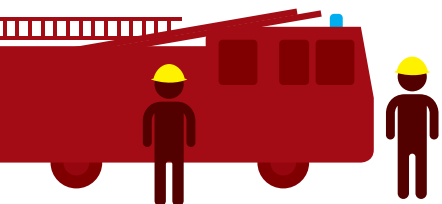


CORNWALL
FIRE & RESCUE SERVICE
A service of Cornwall Council

Working together to make **Cornwall safer**

Please read the information and guidance in this leaflet, and answer the questions in sections 5 and 6 to help reduce unwanted false alarms.

By following our guidance you could reduce/eliminate the disruptive impact of false alarms, improve productivity and save money.



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1. Introduction

This guidance aims to support building occupiers and 'responsible persons' to make sure they are aware of their legal responsibilities, and the actions they can take to reduce unwanted fire signals (UwFS) from their fire alarm system.

It highlights the changes to Cornwall Fire and Rescue Service (CFRS) UwFS policy and operational response to automatic fire alarm (AFA) calls.

Businesses in the UK have nearly 250,000 false alarms a year and according to the Fire Industry Association, this costs business and fire and rescue services £1 billion. Every false alarm causes disruption; this may affect your customer service, your productivity or the general routine of your organisation.

False alarms also have a significant impact on the effectiveness of your fire evacuation strategy and may put the lives of your staff and visitors at risk. If a genuine fire alarm is ignored (for example, because people mistake it for yet another false alarm), this can lead to death, injury and extensive damage. It is well known that many companies that suffer a serious fire may never effectively recover and could stop trading.

In Cornwall we attend nearly 1500 false alarms a year, and only 2% turn out to be fires. This means 98% of our calls to fire alarm activations are false alarms. The impact of responding to false alarms is a drain on our resources and a distraction from real emergency calls and other community services.



“ I ask that you work together with Cornwall Fire and Rescue Service to make Cornwall safer by endeavouring to reduce false alarms in your premises. ”

Des Tidbury

Chief Fire Officer and Director of Community Safety and Protection

2. Your responsibilities

Fire Safety in buildings is controlled by The Regulatory Reform (Fire Safety) Order 2005 and enforced by Cornwall Fire and Rescue Service. Under the Fire Safety Order, employers and others responsible for buildings (see list below) must provide effective fire precautions to protect employees as well as people who may be visiting or using their property.

- Building owners
- Landlords
- Managing agents
- Or anyone who has control of premises to any extent

If you are responsible for a business premises, then you need to act now to ensure you have a suitable and sufficient fire risk assessment in place.

Your fire-detection and fire-alarm system form part of the fire precautions in your premises. A system that causes false alarms may not be efficient as people will gradually lose confidence in the fire alarm and start to ignore its warning.

So it is important that you recognise the importance of keeping the fire-detection and fire-alarm system in good working order and removing the causes of false alarms.

For more information on the Fire Safety Order, go to www.cornwall.gov.uk/rro



3. What is a false alarm?

A false alarm is a 'fire signal resulting from a cause other than actual fire'. There are four different classes of false alarms:

Malicious false alarms – e.g. a deliberate breaking of a manual call-point

False alarms with good intent – someone breaking a manual call point because they believe there is fire e.g. suspected smell of burning

Equipment false alarms – false alarms caused by a fault with the equipment, its installation or servicing

Unwanted alarm – an incident where a detector mistakenly identifies something as a fire e.g. cooking fumes or steam

More specifically a false alarm may be caused by:

- Cooking
- Welding, soldering
- Steam
- Poor maintenance and cleaning
- Damp or water leaks
- Insects
- Open fires and candles
- Dust
- Aerosols
- Poor design and installation



4. How many false alarms are too many?

The number of false alarms in a system that are acceptable is proportional to the number of automatic fire detectors installed, however the number of false alarms will be higher in fire alarm systems where smoke detectors are predominantly used.

In general, false alarm rates of one false alarm per 50 detectors per annum can be readily achievable with modern technology systems. The user has a duty to mitigate all instances of false alarms.

Investigating your false alarms

The following recommendations are taken from BS5839-1:2013 which is the British standard on the design, installation, commissioning and maintenance of fire detection and fire alarm systems.

Large Fire Alarm Systems (more than 40 automatic fire detectors)

The user should instigate an in-depth investigation by suitable specialists if, in any rolling 12 month period if either:

- The average rate of false alarms exceeds one false alarm per 20 detectors per annum or
- Three or more false alarms are initiated by any single manual call point or automatic fire detector (or detector location)

Small Fire Alarm Systems (40 or less automatic fire detectors)

An in-depth investigation should be instigated by the user if:

- In any rolling 12 month period, three or more false alarms occur.

5. Fire alarm management

Was your alarm installed by a competent installer?

By competent we mean someone who has the correct knowledge and skill to carry out the work e.g. a company that are BAFE certified to either SP203-1 or LPS1014 (British Standard). For more information or to find an installer, go to www.bafe.org.uk

Yes No

If you ticked yes, to this question, you have completed a very important step in stopping false alarms in your premises.

If you ticked no, it does not mean your alarm system is not installed correctly, but you should have a full system check carried out. You should ask a competent alarm engineer to do this when they carry out the next service.

Important: When having a new alarm installed ensure the alarm engineer issues an installation and commissioning certificate.

Is your alarm serviced by a competent engineer every six months as per BS5839-1:2013?

Yes No

If you ticked yes, you are doing what is required to comply with the Fire Safety Order and ensuring your equipment does not cause false alarms.

If you have ticked no, the recommended period between successive inspection and servicing visits should not exceed six months. If this recommendation is not implemented, the fire alarm system is not fully compliant with BS5839-1:2013. You need to find a BAFE registered company to service your fire alarm as a priority, go to www.bafe.org.uk

Important: After each service the alarm engineer should issue a servicing certificate. This is like an MOT for fire alarms systems and we expect to see this certificate when we carry out an audit.

Do you investigate the reason for each false alarm and record it?

Yes No

If you ticked yes, you are gathering valuable information which can be used to identify any trends and problem areas in your fire alarm system.

If you ticked no, it is unlikely you know why you experience false alarms. The only way to effectively reduce false alarms is to know where the problem lies. Each alarm actuation should be investigated to find the cause. If it turns out to be a false alarm, record the reason for it, it does not need to be a complex process and a hand written sheet in your fire logbook is sufficient. If you do not have a fire logbook please call St Austell Community Fire Station on **01726 72582** or visit www.cornwall.gov.uk/firelogbook to download a free electronic logbook.

Have you checked your false alarm log for trends and discussed them with your fire risk assessor and alarm engineer?

Yes No

If you ticked yes, great you are monitoring and analysing your false alarm data to reduce the impact of false alarms on your business and on the fire service.

If you ticked no, as part of the six monthly service of your fire alarm system you should always consult your fire alarm engineer about your false alarms. It is also essential that you periodically look at your false alarm log and consult with your fire alarm engineer if you suspect the cause of the false alarm is due to your fire alarm system, as they can help you rectify any problems. We also recommend you consult with your fire risk assessor to ensure any changes to your system meet the requirements of the Fire Safety Order. You may find that in many circumstances the system is not at fault; it is the actions of people that cause the alarm. Regular fire safety training and a review of your work process will help to reduce false alarms.

6. Emergency plan

Does your emergency plan include investigating the cause of the alarm before calling 999 or 112?

Yes No

If you ticked yes, a trained member of staff should safely establish if an alarm is genuine or false before calling the fire service. This means you can find the cause of an alarm actuation and if no fire exists, return to normal working conditions faster and minimise disruption to your business and the fire and rescue service.

If you ticked no, 98% of our calls to fire alarm activations are false alarms. The impact of responding to false alarms is a drain on our resources and a distraction from real emergency calls and other community activities. We recommend you review your emergency evacuation plan to include an investigation period before calling the fire service.

Does your alarm alert a remote Alarm Receiving Centre (ARC)?

Yes No

If you ticked yes, examine the reason why you are using an ARC, if the reason is for only property protection when the premises is unoccupied, you can take the automatic call to the ARC off line when the property is occupied (e.g. during the day) or request a ring-back before a 999 or 112 call is made. Talk to your alarm installer or phone the ARC directly to discuss these options. We only recommend using an ARC if a delay in calling 999 or 112 would put people at significant risk (e.g. residential care homes) or if the building is left unoccupied for long periods of time.

In an emergency, always backup the ARC with a 999 or 112 call to ensure a fire appliance is en-route, never just rely just on your ARC if the building is occupied. If your premises alarm actuates when the premises is unoccupied a key-holder must attend to assist the fire and rescue service.

If you ticked no, no action is required as this question does not apply to you.

Emergency plan guidance

When the fire alarm sounds, everyone in the building should immediately follow the fire action plan. This plan must be well publicised within your building. Designated staff members (or fire wardens) should be trained to safely find out the cause of the alarm. They need to be competent to ensure there is no fire present and declare the premises safe to re-enter.

If you suspect a fire, call 999 or 112 and ask for fire

If there are **no signs of fire** you will need to establish the cause of the fire alarm, below is an example of an investigation procedure.

1. Check the fire alarm panel to find which zone, detector or call point has activated – it's vital that you have a full zone or detector plan displayed immediately adjacent to the panel.
2. When investigating you should not place yourself or anyone at risk and we recommend you do not investigate the cause of the alarm alone. Keep one member of staff at the alarm panel while you search for the activated detector or call point and remain in contact using either a mobile phone or short range radio.
3. Look, listen and smell for signs of fire, it might be smoke, unusual noises or heat. If you suspect a fire, leave the building at the nearest safe exit and inform the member of staff at the alarm panel, then call 999 or 112 and ask for fire.
4. For false alarms your investigations should show you that the false alarm is a result of faulty equipment, malicious acts, human error, or activities near detectors.
5. If the control panel does not show where the relevant detector is, or if no detector was triggered, call in the maintenance company as the problem may be due to faulty equipment. Silence the fire alarm system but do not reset the fire alarm control panel as this can delete the information the engineer will need to investigate the cause of the alarm.
6. Record the false alarm in your fire logbook, if false alarms continue you can analyse your fire logbook to see if there is any pattern that may help you to identify the cause or any trends.

7. Action we take to help reduce false alarms?

Below is a summary of the action we take to help you reduce false alarms if we attend a false alarm at your premises.

Action Level 1 – First false alarm in a rolling 12 month period

The incident commander of the attending crew will carry out an investigation into the cause of the false alarm and give you a copy of the UwFS1 form detailing the reasons for the false alarm. You should keep a copy of this investigation in your records to help you reduce false alarms in the future. The details will be passed to a fire safety officer for information only.

Action Level 2 – Second false alarm in a rolling 12 month period

The same as for Level 1, but a fire safety officer will contact you to suggest ways you can reduce false alarms. This will focus on your fire alarm installation and maintenance, fire safety management and your emergency plan. This may be done by telephone call or a site visit, and will usually be supported by a letter.

Action Level 3 – Third false alarm in a rolling 12 month period

Unless you have had a fire safety audit recently you will receive an audit under the Regulatory Reform (Fire Safety) Order 2005. This will focus on your fire alarm installation and maintenance, fire safety management and your emergency plan, but will also cover a general review of the fire safety in the premises. If contraventions of the Regulatory Reform (Fire Safety) Order 2005 are found then enforcement action may be taken.

Action Level 4 – Further false alarms in a rolling 12 month period

If we continue to attend false alarms at your premises you will be assigned a fire safety officer to work with you on a regular basis, to reduce the number of false alarms you are having. If contraventions of the Regulatory Reform (Fire Safety) Order are found then enforcement action may be taken. Cost recovery for further unwanted fire signals may be instigated.

8. How we respond to automatic fire alarms

As from April 2013 our response to automatic fire alarms has changed. If you call 999, 112 or contact us indirectly through an ARC the response you get will depend on which category your call falls into.

- **Confirmed or suspected fire** - we will send the full predetermined attendance (PDA) to your premises (the number and type of appliances will depend on the type and risk of your premises).
- **Unknown activation of a fire alarm** - if there is no sign of fire we will only send one fire appliance to investigate the cause of the fire alarm. If you later discover that the fire alarm is a known false alarm, please redial 999 and state it is now a known false alarm. We will then redirect our fire appliance and will not attend.
- **Known false fire alarm activation** - if the cause of the fire alarm activation is a known false alarm, we will not send any appliances and you will be informed no fire appliances will be sent.
- **Businesses and premises that have frequent UwFS** - if your premises has reached action level 4 (see section 7) we may implement cost recovery measures for attending false alarms in the future.



9. Contact us

This booklet sets out a series of steps to start addressing the root causes of false alarms. If you require further guidance please contact a member of our technical fire safety team on:

Email: protection@fire.cornwall.gov.uk

St Austell Community Fire Station

Tel: **01726 72582** (office hours only)

Falmouth Community Fire Station

Tel: **01326 212412** (office hours only)

24 hr Fire Safety Advice

Tel: **0800 3581 999**



If you would like this information in another format or language please contact:
Cornwall Council, County Hall, Treyew Road, Truro TR1 3AY
Telephone: **0300 1234 100** Email: enquiries@cornwall.gov.uk
www.cornwall.gov.uk

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