

## Appropriate response: A guide to security system integration, monitoring and verification

The benefits of integrating intruder, fire, access control and audio systems with CCTV for verification of alarm activation



## INTRODUCTION

Budget cuts have seen reduction and consolidation of police forces and fire services. As a consequence, emergency services become more stretched and they have become less responsive. For those deemed low priority 'emergency' response may be measured in hours rather than minutes.

Ultimately, any response is prioritised and correct prioritisation depends on control centres having access to the right information concerning any alarm activation or call for help. Verification of alarm activation by information from other integrated systems is the most significant factor in shaping the priority of emergency response.

The importance of confirmation of alarm activations by visual or audio verification cannot be over-estimated. Even for a high risk site for which a police response would be expected, an alarm activation which is not verified seems to have a fairly low priority.

At the time of writing, the full details of the robbery of the vault at Hatton Garden Safe Deposit Ltd over Easter weekend 2015 continue to emerge. With the booty from the heist nominally estimated by some to be £300m, there are reports that there was no integrated remote monitoring of systems, including CCTV. It is also reported the thieves stole the Digital Video Recorder (DVR) used to store the video data from the vault's cameras on the premises.

In this guide we look briefly at the main types of electronic security systems. We also discuss the importance of integration and remote monitoring for ensuring emergency response to protect children, students, employees, visitors and property is appropriate and correctly prioritised.

## Intruder Alarms

Intruder alarms typically have sensors at entry points to buildings such as doors and windows. Sensors can also detect motion and be placed under foot to detect people walking through or standing in areas that need to be protected. Visual clues to the presence of the alarm such as an external bell box may deter forced entry to premises. The sound of the alarm will almost certainly make an intruder think twice once activated.

## Fire Alarms

Automatic fire alarm systems are designed to provide early warnings of fire and enable people to evacuate buildings. However, the vast majority of signals from automatic fire alarms are not actual fires. Besides fires, such alarm and detection systems react to things such as steam, cigarette smoke, aerosol sprays, and light smoke from cooking, triggering false alarms. If Fire & Rescue Services are asked to attend a false alarm, this is considered to be an Unwanted Fire Signal.

Any fire warning system needs to be installed by qualified and reputable companies, and maintained and operated properly. In the worst-case scenario, for many, the consequences of failing to observe these recommendations are unthinkable.

## CCTV

There can be little doubt about why Closed-Circuit Television (CCTV) has become so ubiquitous – it is simply one of the most effective means of safeguarding property and people. It not only helps prevent criminal activity, it also aids identification and the detection of offenders.

The latest video surveillance technologies include HD CCTV, Wireless CCTV, ANPR (Automatic Number Plate Recognition). Deployed with face recognition and image enhancement technology, CCTV is invaluable for identification and detection purposes. It is also indispensable for safeguarding public spaces and enabling crowd safety. For anyone that is serious about protection, CCTV needs to be given serious consideration.

## Access Control

Electronic access control offers significant advantages when compared to key-based systems.

Access control systems make managing entry into as well as controlling access within buildings easy. Systems can be deployed to operate a variety of entry control mechanisms, including revolving doors, turnstiles, gates and barriers. Access control systems provide the ability to operate entrances and exits by any of the following:

- Entering a code into a keypad
- Presenting a key fob or token
- Swiping a card
- Biometric fingerprint readers

## Audio Entry

Audio entry systems allow verbal communication with callers before they are admitted. These systems enable visitors to be identified and authorise access without the need to physically go to the entry point. Positive identification of callers before granting entry minimises the risk of forced entry when an access point is initially unlocked to a visitor.

This is extremely useful across larger sites, whether it is for main doors or automatic gates for vehicle access, or for businesses occupying upper levels of multi-tenanted buildings.

## The case for integration & 24 hour remote monitoring

Any of the security measures outlined above can be deployed as an individual system. They are all perfectly capable of performing their specific function in isolation. However, the greatest benefits are seen by integrating separate systems.

The larger the site, the more complex the security systems; operating separate, discrete systems, while maintaining control and delivering reliable protection and safeguarding becomes a difficult process. Essentially, with increasing size, comes a greater need for security systems integration.

Whether it is for some, or all of the systems outlined above, integration brings them under central management control. This enables the information from different systems to be viewed on a single screen, vastly simplifying the process of maintaining safety and security. CCTV remains a significant lynchpin, because visual confirmation of alarm activation or the data received from other systems is compelling.



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24 hour remote monitoring across integrated systems provides the opportunity to obtain verification of intruder and fire alarm activation. For situations where police or fire and rescue may be required, this is of vital importance in ensuring that emergency responses are necessary and appropriate.

Analytics, or more correctly, Video Content Analysis (VCA) is a rules-based technique that provides alerts when user-defined conditions are met. For example, analytics is able to detect and alert when people or vehicles are in an area at a time when they should not be; or detect when someone is absent from an area, such as a security guard.

## Police response to alarm activation

In recent years across the UK in excess of 92% of all alarm activations were false and caused by equipment, communication or user error. As a result, police follow the Association of Chief Police Officers (ACPO) Unified Intruder Alarm Policy which defines two types of alarms and the police response to each.

- Type A - Remote Signalling Alarms
  - The police response to activation of Type A alarms is based on the assumption that an offence is taking place. However, response is prioritised against demand across available police resources. 3 false activations in any 12 month period means activations may rate a lower priority for police attendance.

- Type B - Audible Only Alarms
  - For police to attend activation of a Type B alarm there needs to be an indication that an offence is in progress, such as a witness report. Once again, any response is prioritised against demand.

The policy outlined above means police response and the time taken to respond are likely to be variable. Integration enables CCTV and audio to be brought together with alarm activation to provide visual and audible verification of intruder activity. Verification negates 'false positives' - and may enable criminals to be apprehended - both of which are likely to positively influence the prioritisation of police response. If persons of interest, such as prolific criminals are visually identified performing criminal acts, response is likely to be further incentivised.

Main benefits of integrating and 24 hour monitoring of intruder alarms:

- Intruders 99% likely to desist when challenged over PA system and advised that they are trespassers and being recorded
- Requests for police response verified when originating from compliant monitoring stations
- Key holding response
- Likely to reduce insurance premiums

## Fire & Rescue response to fire alarms

In London, the fire service is not required to attend calls that are made solely because a fire alarm system has actuated. 2012/13 statistics for the London Fire Brigade (LFB) show around one third of approximately 39,000 calls were false alarms.

False alarms have local consequences and could cause disruption and expense. This includes:

- People in buildings experiencing frequent false alarms become complacent
- Stretching limited resources and delaying responses to real emergencies
- Disrupting essential firefighter training
- High speed blue light response causes unnecessary risk to the public

To better manage false alarms all fire services set out a number of recommendations including the use of:

- Fire risk assessments and staff/building user training and guidance
- Alarm maintenance, including false alarm trouble-shooting
- Reviewing false alarms to understand and remediate any site issues
- Consider using a remote monitoring service to use call-back, work closely with key-holders and share information on incidents

## Fire & Rescue cost recovery charges for false alarms

Across the UK fire services exercise the right to recover costs. To help reduce unnecessary calls and encourage better management and maintenance of automatic fire alarm systems, the LFB operates a cost recovery policy. Commencing from the tenth false alarm attendance in any 12 month period, a charge of £297.00+VAT is made for each incident attended.

For large sites with complex systems such as office blocks or educational centres, which may be prone to false alarms, failing to follow fire service guidance and recommendations may have significant financial impacts for repeated unnecessary attendance.

Main benefits of integration and 24 hour monitoring of fire alarms:

- Requests for fire & rescue response verified when originating from compliant monitoring stations
- Integration with CCTV provides visual verification of real fires
- Helps ensure safety by providing 'what to expect for' employees investigating alarm activation
- Helps prevent false alarms and any fire brigade cost recovery action which may result
- Remote fault reporting
- Likely to reduce insurance premiums

## CCTV, Access Control & Audio Entry

Main benefits of integration and 24 hour monitoring of CCTV:

- Visual indication and verification of intrusion
- Confirmation of intruder alarm activation through visual verification
- Confirmation of fire alarm activation through visual verification
- Confirmation of audio entry visitor identity through visual verification
- Confirmation of access control identity through visual verification
- Likely to reduce insurance premiums
- Prevents false alarms
- Remote footage retrieval

Main benefits of integration and 24 hour monitoring of Access Control:

- Remote token, card or fob management
- Remote override for door or automated gates
- Integration with CCTV provides visual verification of identity
- Remote monitoring station able to challenge if cardholder identity cannot be verified by CCTV and request police response if required

- Two part 'binary' system requiring two tokens, cards or fobs to be presented simultaneously to control access e.g. mother & baby tags for maternity units
- Remote monitoring automates door locking, security alarm activation, CCTV footage tagging and on-screen pop-ups for security teams for out of policy 'binary' access control events
- Fault reporting
- Audit management
- Database and token, card or fob management

Main benefits of integration and 24 hour monitoring of Audio Entry:

- 24 hour service to receive calls from panels
- Name and password identity verification of people requesting access
- Integration with CCTV provides visual verification of identity

## SUMMARY

### Why select iC2 as your security systems integration and 24 hour remote monitoring partner?

iC2 is a leading mid-market security systems provider and was established in 2001. The business is owned and managed by a team with a collective experience of over 100 years in the electronic security business. iC2 holds CCTV and security accreditations with NSI and BSI.

Whether the requirement is solely for CCTV, or for a new fully integrated system, iC2 provides the consultancy led services to specify, supply, install and support a full range of integrated electronic security solutions. This includes HD CCTV, Wireless CCTV, ANPR (Automatic Number Plate Recognition), Remote Monitoring, Access Control, Audio Entry, Gates & Barriers, PA Systems, Fire Alarms and Intruder Alarms.

iC2 integration and 24 hour remote monitoring services help:

- Design, specify and implement new integrated systems
- Integrate and upgrade existing security systems
- Provide round the clock monitoring, verification and appropriate response services

A prestigious client list including luxury international boutique brands, top flight sporting venues, retail developments and educational and social environments demonstrates how solutions are deployed to meet a variety of requirements.

From deterring theft of high value luxury goods, to sports fan and public safety and child protection, solutions are deployed to meet a range legitimate purposes for which they are appropriate and fit for purpose.

## REFERENCES AND FURTHER READING

[RJ Insights: The impact of the Hatton Garden heist](#)

Retail Jeweller – Editorial opinion article from leading trade journal

<http://www.retail-jeweller.com/opinion/rj-insights-the-impact-of-the-hatton-garden-heist/5073830.article>

[Security Alarms](#)

Metropolitan Police

<http://content.met.police.uk/Article/Security-alarms/1400011145584/1400011145584>

[Reducing Automatic Fire Alarms](#)

London Fire Brigade

<http://www.london-fire.gov.uk/reducingafas.asp>



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## About Us

**Keeping you safe and secure at all times**

**IC2 provide you with innovative solutions tailored to you and your sector. We are London-based with a national team of surveyors and engineers that work closely with our clients throughout the UK and internationally.**

Our unique consultative approach allows us to tailor bespoke systems to your individual requirements, ensuring that your operational requirements are met.

We appreciate the need to demonstrate the best value to you every time and as a technology-led company, you can expect our cutting-edge and ground-breaking approach to serve your needs for many years to come.

Please feel free to contact us to discuss any requirements you may have. We are happy to give you impartial advice, should you have any queries.

