

INTRUDER ALARM SYSTEM BUYERS GUIDE

FIRE AND SECURITY



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INTRODUCTION

Offices, warehouses and other working environments can make very inviting targets for unwanted behaviour. Failing to secure your business premises properly could result in theft, anti-social behaviour, and accidents causing harm to your workers and the public. At TouchStar, we have been supplying tailored fire, security and monitoring solutions to businesses across a variety of sectors for more than 30 years.

Using our extensive experience in intruder alarm systems, we have created this buyers guide that will help support you on your way through to the purchase of a new or upgraded system. Covering everything from starting out, defining your system requirements, supplier selection and legislation through to types of systems and system support, we take you through the steps to help you determine the best fit solution for your premises.



1. The start point

Commercial intruder alarm systems offer a visible deterrent against potential intruders as well as providing an audible alarm or remote notification when a pre-determined security breach has occurred.

The demands on any intruder alarm system installation will vary from sector to sector. The first step towards designing a new system is to nail down exactly why it's needed and what it needs to achieve. Building security – is often the main reason for looking to implement a new solution, but the motivations behind this need are often more complex. Different organisations will have differing objectives in mind; a school or university may be driven by a need to safeguard its perimeter or premises, whilst a warehouse may be more interested in protecting valuable assets.

Whilst today's systems offer numerous operational and cost benefits, they are not faultless. Whatever the need, it is important that you take the time to thoroughly appraise

your current organisational premises and set up at the outset. Choosing a best fit solution can really optimise security within any operation, ensuring businesses are better protected, compliant, and effective. Some of the most common reasons for installing an intruder alarm system include:

- **Improve security** – Fulfil all the security requirements of your building and premises whilst protecting against unwanted visitors or behaviour.
- **Safeguarding of assets** – Provide a visible deterrent around commercially sensitive areas or valuable assets. Provide an instant alert for immediate action should the system be triggered.
- **Insurance** – To provide coverage for commercial properties, insurance companies often require an Alarm Receiving Centre (ARC) monitored system, ensuring alerts and prompting a police response.

2. Legislation and Compliance of Standards

When starting out, there are various industry standards and legislative requirements that should be considered alongside the installation of an intruder alarm system. These can be summarised as follows:

BS EN 50131 EUROPEAN STANDARDS

Operating in accordance with International and British Standards, the **BS EN 50131** series covers a detailed set of European standards that address all the different aspects of intruder alarm systems. The British Standards Institution (BSI) adopted these guidelines through their **PD6662** scheme to boost intruder alarm standards. By working with a supplier that adheres to these standards will ensure that any system installation is designed, installed and maintained to meet specific safety and security criteria.

- **NPCC 'Requirements for Security Systems'. England, Wales and Northern Ireland**

The Police in England, Wales and Northern Ireland will only register and respond to alarm systems that meet the requirements of the [National Police Chiefs' Council \(NPCC\)](#). To enable a security system to be compliant with the Requirements for Security System's it must comply with a recognised standard or code of practice controlling manufacture, installation, maintenance and operation. The installation, maintenance and monitoring provided by companies should be certified by a United Kingdom Accreditation Service (UKAS) accredited certification body in accordance with the Requirements and Response to Security Systems.

Application of **PD 6662:2017** and **BS 8243** for any system installed after June 2019 will ensure the system conforms for the purpose of obtaining a police response.



DATA PROTECTION ACT

All organisations in the UK must comply with the Data Protection Act, particularly if you are planning to use CCTV in conjunction with an intruder alarm system. This includes members of the public and staff members alike. Signage is generally the simplest way to tell people that they are in a monitored area, this must be clearly visible and readable.

HUMAN RIGHTS ACT

Similarly, integration of CCTV and intruder alarms system means that you need to be aware of your responsibilities under the Human Rights Act 1998, and more specifically, Article 8 – A right to privacy. If you're unsure if Article 8 applies to you, you can take an online self-assessment and register your CCTV solution with the ICO at: [gov.uk/data-protection-register-notify-ico-personal-data](https://www.gov.uk/data-protection-register-notify-ico-personal-data)

3. Supplier Selection

There are many suppliers / installers that operate within the commercial security industry so it can be a complex task to narrow them down to the ones that will provide you with the experience, reliability, and support levels you may require.

Here are some common areas to consider when looking at potential suppliers:

ACCREDITATION / CERTIFICATION

One of the best ways to determine whether you are dealing with a competent intruder alarm installer is to check their accreditations. While any company can claim to meet [British Standards](#), only certain organisations provide official accreditation to back up these claims, especially for security installers. The two main inspectorate bodies for business intruder alarms recognised by the police are:

- **NSI**

NSI approval is a highly respected and trusted hallmark in the security and fire sectors, demonstrating technical expertise and a reassuring quality of service. NSI approved companies operating to NSI codes of practice, are all subject to a rigorous bi-annual audit programme, these take place within the company's offices and a completed installation. Gold or Silver approved installers are recognised by the Police and should provide a contract covering alarm monitoring services provided by an NSI approved ARC, as well as maintenance. They should also provide:



- **A Certificate of Compliance to PD 6662 or BS8418 for your installation.**
- **An explanation of how a Police Unique Reference Number (URN) can be obtained. This means your alarm system will be registered with the local police.**

The vast majority of NSI approved companies choose to hold Gold approval which includes all cases ISO 9001 approval for Quality Management Systems. For companies who declare they hold NSI approval, they must demonstrate their certification alongside any NSI services they promote.

- **SSAIB**

SSAIB is a leading certification body for organisations providing security systems and services, fire detection and alarm systems, telecare systems and services, manned services, approved contractors scheme and monitoring services.





3. Supplier Selection

CASE STUDIES / TESTIMONIALS

A company that can demonstrate a portfolio of happy clients, testimonials and case studies provides a good indication you are dealing with a reputable installer. Companies should also be happy to provide references or a site visit if applicable.

SERVICES

It is worth investigating what services your intruder alarm supplier can provide and this can help you understand what support you are likely to expect. A supplier that has been established for many years and has their own in-house installation team provides a good level of confidence that you are likely to receive high service levels. However, it is also important to ensure that your service requirements are aligned with the capabilities of your supplier. Most suppliers can be grouped as follows:

- Supply Only.
- Supply and Install.
- End-to-End – Design, specification, install, support, monitoring and maintenance.

INSURANCE

Checking the insurance details of any supplier is a must. Most suppliers that carry an accreditation will be covered, but it is always a worthwhile activity to ensure that they have the correct cover in place.

It is important to check for the following:

- Employers' liability to cover their own staff in the event of an accident.
- Public liability to cover damage or injury to clients and their property.

4. The Survey Process

It is important that when considering a security installation of any kind that you should look for a supplier that will help you undertake a no obligation appraisal of your requirements and objectives.

Requirements can vary from sector to sector, the size and complexity of the building and the type of business trading from the property can all have an impact on the final recommendations or the installation phase of your project.

To comply with European Standard Technical Specifications a site survey and risk assessment of your commercial property should be undertaken by any supplier.

Following your site survey, you should expect a provider to address the following aspects:

- Risk assessment – Relating to the security grading and design of the proposed intruder alarm.
- Insurance requirements.
- IT network requirements.
- Defined zones, entry and exit routes.
- Setting and unsetting methods.
- Remote monitoring / External communication methods.
- Customer responsibilities.

Any recommendations should consider the scalability and futureproofing of your proposed installation.



5. Types of Intruder Alarm System

Once you have specified what your new intruder alarm system needs to be capable of, it's time to decide on the technology that will best do the job.

The system design specification should list the equipment and components to be supplied, detail their proposed locations, standards compliance and contain a general indication of their coverage or purpose.

Commercial intruder alarm systems typically consist of detectors, a control panel, and a communication network. Often, these are linked to alarm receiving centres (ARCs) which monitor security breaches and provide 24/7 responses.

As a start point, there are several different types of systems on the market which can be defined as follows:

WIRED SYSTEMS

These systems are wired from a main control panel with all components such as detectors, warning devices and keypads wired back from dedicated mains power from around the premises. These can be more complex, time consuming and disruptive to install as it involves a more intrusive wired installation.

WIRELESS SYSTEM

Perfect for temporary sites or those whereby a wired connection is not viable. Wireless systems are much easier to install, which is of particular benefit to complex operations where dedicated wired installations are not feasible. Wireless communication connects the detectors and components back to the main control panel. These are quicker to install and are starting to become more popular in commercial installations.

HYBRID SYSTEM

As the name implies, these systems can use traditional cabling as well as integrated wireless technologies. Hybrid systems avoid the disruption associated with a full system wire and work well in premises with installation points that are difficult to reach. These systems can be installed as part of an upgrade path or system extension, whereby wireless technology can be fitted to a system over a period of time.



6. Intruder Alarm Products

INTRUDER SYSTEM CONTROL PANELS

An alarm control panel serves as the hub of a comprehensive intruder alarm system. It is the core component that integrates and manages all security devices within the setup. Every sensor, detector, and warning device will connect with the control panel, which in turn, continuously monitors their status. When any of these devices are triggered – whether it is due to motion, an open door or window, or another security breach – the control panel processes the alert and notifies the user immediately. This notification can take various forms, such as an audible alarm, a mobile app alert, or a direct communication to a monitoring service. The alarm control panel ensures that the user is promptly informed of any potential threats, enabling swift and appropriate responses to safeguard their people, premises and assets.



DETECTORS

There are various types of detection devices and features that may be incorporated. The type and number of detectors will be specified by your installer dependent upon your environment, system requirements and objectives. Detection devices are particularly useful on unmanned sites in conjunction with monitored systems.



- **MAGNETIC CONTACTS**

Magnetic contacts can be installed as part of either an internal or external wired/wireless system. Surface mounted, they comprise of a magnet and sensor, are tamper proof and can trigger an alert if a door, window or roller shutter is either open or closed.

- **PASSIVE INFRARED (PIR) MOTION SENSORS**

PIR motion sensors are straightforward to install and offer accurate detection for numerous applications. They provide a reliable and cost-effective detection method in all lighting conditions by sensing infrared radiation emitted by heat-producing objects.

- **DUAL TECHNOLOGY DETECTORS**

Cost effective and easy to install, dual-technology combines a passive infrared sensor with a high frequency microwave for reliable detection. The infrared detector detects temperature variations during an intrusion and can be used in a wide variety of environments to protect specific assets or strategic locations such as passageways or building entrances.

- **INERTIA SENSORS**

Inertia sensors are designed to prevent unauthorised entry by detecting the shattering of glass in windows or doors. Operating by sensing vibration, they are surface mounted and compatible with all system types. Mostly used for perimeter protection they are activated by single large shocks or multiple small shocks, triggering an alarm before intruders can enter the building.

- **REMOTE KEYPADS**

Remote keypads are installed for the purposes of setting and unsetting an intruder alarm system. Normally mounted by a defined entry point, they provide user control of the intruder and hold-up alarm system. These keypads can also integrate digital key readers compatible with proximity tags or fobs as an alternative to using keypad entry.

7. Time and Attendance Employee Time Clocks

WARNING DEVICES

- **EXTERNAL SOUNDERS/BELL BOXES**

Bell boxes provide a visible deterrent for unwanted behaviour in collaboration with external sounders which rely on an audible sound to deter any form of security breach. Bell boxes can also integrate strobe lighting that use strong, pulsating lights to notify building occupants when an incident, alarm or fault has occurred. When specifying a system, you should ensure that your sounder and bell box are both weather and tamper proof. These devices come with their own back up battery, so remain operational even if physically removed from the building.



- **INTERNAL SOUNDERS**

Internal sounders are commonly installed alongside external sounders to provide an additional deterrent against intrusion. These internal devices emit loud, attention-grabbing noises that can disorient and scare off intruders while simultaneously alerting occupants of a potential security breach.

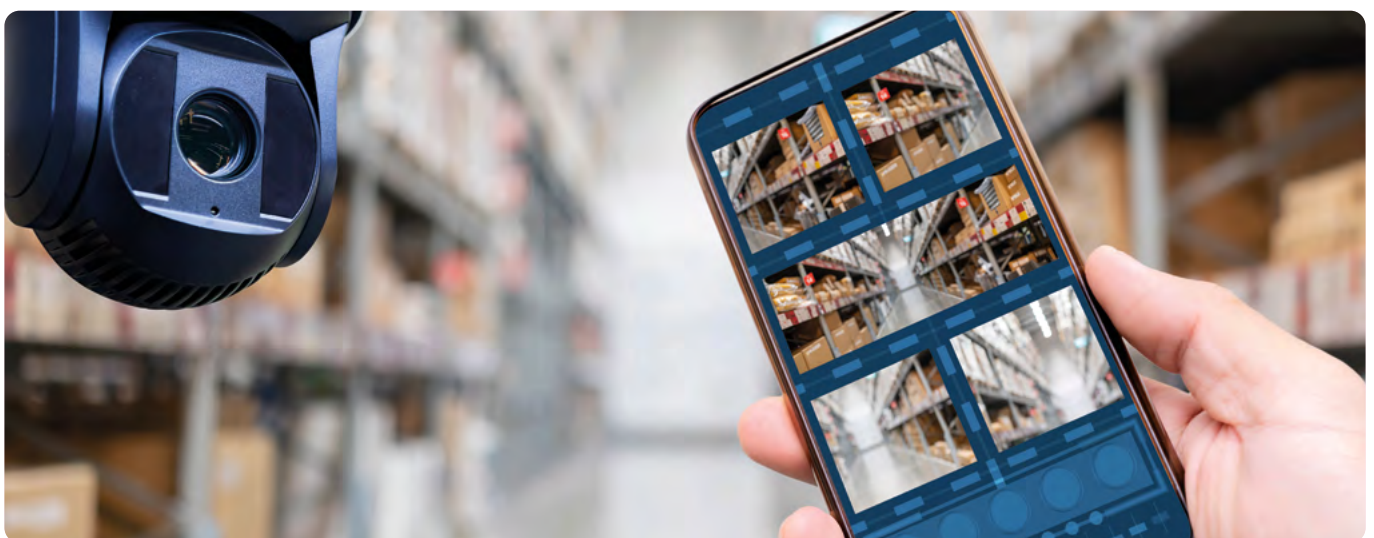
Additionally, low-pitched internal sounders serve a practical purpose for users when setting or unsetting the alarm system. The distinct sound signals help ensure that users are aware of the alarm system's status, reducing the likelihood of accidental triggers.

INTERFACES

- **INTEGRATION PLATFORMS**

For companies that are looking for a more integrated solution, middleware platforms offer a means of integrating any third-party application into your intruder alarm system when a direct link is not possible. This could include anything from Access Control, CCTV, Fire, Police or key holding resource.

Detector active intruder systems can also be installed to facilitate remote monitoring, your installer will be able to make the appropriate recommendations for these scenarios when specifying your installation.



7. Monitoring

Intruder alarm monitoring ensures that any premise is fully safeguarded and protected, 24 hrs a day, 7 days a week. Monitoring can be enabled just for out of hours or on empty premises, it is normal to agree keyholders, contacts, alarm setting and unsetting times with your ARC during the system handover process.

Your ARC should adhere to a predefined procedure upon receiving an alert. This involves notifying the appropriate response services and keyholders.

Monitoring can optimise existing manned security operations, allowing for full visibility of large operations and triggering alerts to enable security personnel to go to investigate any incident. For particularly high-risk sites, these can offer a cost-effective alternative to on-site manned guarding, saving many thousands of pounds in these costs. Fully monitored systems must comply with [NPCC 'Requirements for Security Systems'](#) to gain immediate police response.

8. Cost

When looking at quotes comparatively, it is very common for costs to vary.

Whilst reviewing an intruder alarm system quote, it is often good to review them with the following cost checks in mind:

- **Types of devices** – The costs will vary dependent upon quality and features such as the panel, detector, warning device types and so on.
- **Understand Your Power Source** – There are significant cost differences between wired and wireless systems. The cost of the intruder hardware can also vary dependent upon the power source, wireless detectors are notably more expensive for example. With regards to any power work required, it is important that you check whether your installer is accredited for electrical works, if this is not the case, there will be an additional cost required for an electrical contractor.
- **Network Installation** – Is there going to be a separate network installed for the new intruder system or will it be connected to the buildings main infrastructure? Is it recommended that an intruder system is on its own network or split away from the main infrastructure via a VLAN.
- **Service Charges** – Some providers may or may not include costs such as monitoring, maintenance and repairs. As a minimum, ensure that servicing costs are included – often, the annual maintenance of an intruder system is an insurance stipulation so needs to be undertaken to ensure compliance. It is worth noting that a [wireless system](#) will incur additional charges as these require annual battery replacements.

9. System Installation and Training

Once you have approved a quote you should expect a project delivery manager to be assigned to your installation. The purpose of the project delivery manager will be to verify the initial recommendations, undertake the appropriate level of testing to support the process, carry out the relevant risk assessments, issue a method statement and plan the installation.

A good project delivery manager will work hand in hand with the relevant contacts on your site to develop the infrastructure for an effective deployment. Identifying the work areas and schedules, a successful installation will ensure there is little or no disruption to your day-to-day operations.

10. Commissioning and Handover

Once it's in place, it's time to test the system. Your installer should run through a thorough set of tests to ensure the solution is as required/quoted to confirm an "as fitted" specification.

Your installer should offer guidance on testing the system and provide a logbook. If you're working with an NSI Gold accredited company, they should supply detailed documentation, including installation and commissioning certificates, along with an NSI "Certificate of Conformity." An approved NSI quote should clearly outline the expected system, which can then be compared to the actual installation, ensuring consistency and protection for both the customer and the installer.

During the handover of an intruder alarm installation, the customer should be advised to notify the installing company and/or the police in writing of the keyholders' names, addresses, and telephone numbers immediately upon commissioning the installation and whenever keyholder details change.

At the end of the handover, the customer will be required to sign a Completion Certificate, confirming acceptance of the installation.

TRAINING

Once your new intruder system is in place, you should expect to receive full instruction on how to use the security system and undertake full training in its use. In the case of an intruder alarm installation, where there are designated entry routes and exit routes, attention should be drawn to these routes during handover. The customer shall be advised to inform the keyholders of these routes and to give the keyholders copies of the detailed procedures and verification codes.

Your installer should be able to provide full operating instructions alongside short onsite training sessions, run in small groups, covering everything from basic daily operation to specific scenarios they are likely to face. A train the trainer approach works best as you then have onsite ownership that champions the solution. Once new working practices are rolled out, it's also a good idea to add intruder security and any other updated processes to staff handbooks and policy documents.

11. Service Support and Maintenance

When looking for a supplier, it is worth looking for a well-established supplier that has a good network of local engineers to provide the best and most reliable support for your installation.

As mentioned, intruder alarm systems are often a stipulation of your business insurance policy and do require regular maintenance to ensure your system remains compliant and in optimal working condition. Compliance with industry standards will require regular inspection, maintenance and testing of your system. This could be an annual service or more frequent preventative maintenance visits depending on the size and complexity of the system. It is important to be aware of what support your supplier can offer and whether these align with your needs, e.g what are their response times and whether they offer out of hours etc.



12. Conclusion

We hope you have found this guide useful. If you need any further information or guidance, talk to our team of experts who will be able to advise you on any element of a intruder alarm system installation.



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Securing the Logistics of People and Product