

***Guidelines to  
Security Fogging***

***ROBBERY PROTECTION  
FOR JEWELLERY SHOPS  
INSTALLATION  
& RISK ASSESSMENT  
GUIDELINES***

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Document assembled by Bandit UK Limited e & o e

# ROBBERY PROTECTION FOR JEWELLERY SHOPS INSTALLATION & RISK ASSESSMENT GUIDELINES

***Bandit's Security Fog Deterrent System is designed to achieve the following:***

- ✓ **Deter physical contact with the shop staff and minimise any associated trauma and threat to staff**
- ✓ **Remove the criminals access to the jewellery and therefore negate or minimize stock loss & damage to property**
- ✓ **Highly visual signage to deter risk of robbery** (Risk of no reward removes incentive for the criminal and minimises down-stream robbery risk)
- ✓ **Empower Staff** (by creating an element of control in an otherwise control-less and frightening experience)
- ✓ **24/7 Risk Protection** – dual settings for both daytime robbery and out of hours burglary risk

## ***Method:***

**The daytime robbery risk setting, activated via the dedicated PA Buttons or wireless remote key fobs is designed to achieve the following:**

- Break the raider's eye contact and threat to staff within the shop
- Rapidly 'Push' (using the horizontally, fast moving cloud of fog) the raider out of the premises
- Create a curtain of fog in areas where assets are displayed or may be accessed/attacked
- Create a strong, credible and highly effective deterrent

***IMPORTANT – A clear exit route must be identified and maintained at all times for the intruder, staff and the public.***

As stated in EN50131-8, for added safety (and an insurance requirement for daytime activation) an **electronic warning announcer** must be used and run in parallel to the fog activation. Bandit UK's announcer supplied as standard states the following message at the same time as the fog activation:

***"Security Fog has activated and the Police are on their way - The fog is completely harmless, please remain calm and do not move until advised"***

## ***Bandit Positioning:***

The Fog Bandit should ideally be located toward the back of a jewellery shop so as to direct the horizontally ejected plume of fog (projects 6 metres within the first 2 seconds alone) towards the public entry point so as rapidly push intruders out (or stop them coming in if access control system being attacked), stopping internal access to the window displays and minimising any associated damage. The Fog Bandit will then back fill the retail area. Depending on the layout of a shop the Fog Bandit can be wall mounted, ceiling mounted or contained within a counter (as long as it is positioned towards the back of the shop). Unlike out of hours protection where total room-fill of security fog is required, the activation setting for daytime fog deployment should be limited (typically to half the overnight setting to achieve the design criteria above.

EN50131-8 state that the activation of a fogging system should NOT create a 'man-trap'. Therefore a clear exit/escape route must be maintained for intruders (ideally the fog 'pushing' them back out of the entrance door) as well as for shop staff and any customers (ideally retreating back behind the

counter and into a safe rear area). It is also important that upon panic activation of the fog, any access control on the entry/exit route (i.e. mag-lock on door or air-lock door systems) is also simultaneously activated to release door locks and therefore maintain an unencumbered escape route. This is achieved by the fitting of an additional relay board inside the Bandit, which provides either an "open" or "closed" contact indication to the access control equipment for this purpose. In the event of a robbery the intruders need be able to get out as the fog is activated. The Jewellery shop owner need not be concerned that activating the fog and releasing the door lock system whilst the raider(s) are still on the outside, will mean that they could then enter as the plume of fog will have already reached the front of the shop deterring them from proceeding any further.

Producing 28 cubic metres of dense fog per second a single Fog Bandit used in such situations can deliver up to 25 fog activations before a exchange refill cartridge is required. Because the fog ejection output time requirement for Bandit "panic" operation is normally less than that required for a "burglary" situation, an additional timer relay board is fitted and used to adjust this time as required.

### ***Alarm Integration – important to note!***

Fog Bandit can be connected to the existing alarm system for daytime robbery activation via the existing "panic" configuration (which may consist of PA buttons and/or wireless remote key fobs) and out of hours burglary via the existing alarm sensors. Fog Bandit fault and tamper is monitored and communicated via the existing alarm panel. To do this spare inputs (X2) / outputs (X3) are required from the alarm panel, the inputs being for the Bandit's "fault" and "tamper" monitoring and the outputs being for "set", "activation" and "panic" signals to the Bandit as required. An alarm engineer is required towards the end of our installation for the connection to the alarm panel. Alarming and disarming of the Fog Bandits out of business hours is via the existing alarm panel. If the key holder entrance route delay (often 60 seconds) to turn off the alarm is via a front entrance door and through the retail area, is also the areas at risk, we strongly suggest a method of removing this delay in activating the Fog Bandit in the event of a break-in. The simple method to achieve this would be an external proximity reader supplied by the alarm company at the entrance door (possibly using a mag-lock to prevent entry unless proximity reader is swiped first), connected to the alarm panel, that buys the alarm key holder a delay in the Fog Bandit activating before keying in the code on the alarm panel as normal.

### ***Stand-Alone Operation:***

Fog Bandit can also be configured for completely "stand-alone" operation, using its own dedicated means of arming/disarming the system (e.g., Proximity Reader or door-fitted "shunt lock") and directly connected Dual-Technology Intruder Detectors for burglary operation, together with dedicated PA buttons and/or wireless remote key fobs for day time "panic" operation if required. In this instance, a separate Fault Module Unit (FMU) can be provided in order to alert the customer to any Bandit system status changes such as mains power failure, system "tamper", fluid level low, etc. and as indicated below. Such a configuration may be beneficial if, for example, the existing intruder alarm system is prone to frequent false alarm indications, or is not able to provide the required inputs and outputs to the Bandit system, as described above.

### ***Essential points to note about the Fog Bandit system:***

- Fluid low – when fluid level reached below 30% a fluid low indicator flashes on the front of the Bandit and a signal is sent to the intruder alarm panel or FMU. This gives time for the site owner/manager to order an exchange refill whilst still maintaining required security levels/protection in case of an attack.
- System isolation switch – should an engineer isolate the Fog Bandit whilst conducting routine maintenance on the alarm system, the Bandit will send a warning signal to the alarm panel or FMU should the Bandit system not be turned back on within the hour.
- Independently certified by an Accredited Laboratory that the fog emitted by the Bandit meets European Indoor Air Quality standards and is therefore totally safe for use in public places.

Typically such signals to the alarm panel cannot be ignored and have to be reported as they prevent the operator from setting the intruder alarm. Where an FMU is fitted a repeater buzzer sounds until the problem is rectified.

Furthermore the Bandit has a 24/7 self-diagnostic process which will instantly report to the intruder alarm panel the following:

- Tamper
- Fuse blown
- Battery problem
- Power supply problem
- Environmental temperature too high i.e. over 50°C (this would typically be caused by a fire on the premises in which case the Bandit would also, automatically, prevent a fog activation)
- Control box cabling problem.
- Central processor failure
- Heat exchanger problem
- Internal cooling fan failure
- General non-specific failure

In all cases where status changes are reported by the Bandit, warning lights on the front of the Bandit will also flash.

Ultimately the Bandit is about dependable reliability, speed, density and instant activation. From the moment an activation signal is received by the Bandit takes just 0.1 of a second to deliver 28 cubic meters of high density (eye to object visibility no greater than 30cm) fog per second.

The Fog Bandit is a proven method of deterring and foiling attacks on Jewellers and this should be communicated this by warning deterrent signs at front and rear access points.



PLEASE CONTACT US ON 0844 5577 870 FOR ANY RISK-ASSESSMENT OR INSTALLATION RELATED QUESTIONS  
THANK YOU

# CHECK LIST

## of essential requirements for a Security Fogging System installation

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As well as the fogging system complying with and installed to EN50131-8 regulations, the following requirements are considered essential for an effective and reliable system:

### 1. PERFORMANCE OF THE SYSTEM

To ensure minimal losses are incurred in the event of a burglary/robbery attempt, a room fill (whole room for burglary – asset area for robbery) time of a maximum of 10\* seconds is recommended with a fog density (eye to object visibility distance) level of a maximum of 50cm

\*The 10 seconds is the total time taken from when a raider/intruder is detected and an activation signal is sent to the Fog system (via detector or PA button) to when the desired room-fill result is achieved. In robbery situations as close to instant fog ejection as possible is essential (**NOTE:** some fog systems are susceptible to a few seconds delay before fog starts ejecting) to maximise deterrent effect and minimise operator anxiety,

### 2. SYSTEM FAULT REPORTING

It is essential that the fog system reports malfunctions which may cause the system to become in operable such as:

- Fog fluid level low
- Power problem/failure (mains or battery)
- System has been isolated (typically by alarm engineer to avoid accidental fog activation)
- Or any other malfunction which may cause the fog system to become inoperable

Whether the fog system is connected to a monitored Intruder Alarm System or stand alone, it is essential that such malfunctions are reported in a manner that is immediately evident to the owner/staff/occupants of the site. An audible warning method is highly recommended.

### 3. REGULAR SERVICE & MAINTENANCE

Service & Maintenance must be conducted as per the manufacturers requirements and records maintained accordingly.