Technical Report: Comparative Analysis of Fog Bandit vs. Smoke Screen

# 1. Introduction

Security fog generators are used to deter intruders by deploying dense fog to obscure vision, delay theft, and allow time for law enforcement or security response. This report provides a detailed technical comparison of Fog Bandit and Smoke Screen systems, focusing on performance, power consumption, activation speed, fog density, installation, and maintenance.

# 2. Product Overview

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| Feature | Fog Bandit 240DB | Smoke Screen Sentinel S55  |
| Manufacturer | Bandit NV (BE) | Concept Smoke Screen (UK) |
| Primary Function | High-speed intruder deterrent fog system | Security fog generation for visual impairment |
| Target Market | Retail, banking, ATMs, residential, logistics, warehouses, high-value storage. | Commercial, retail, warehouses, high-value storage |

# 3. Technical Specifications

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| Parameter | Fog Bandit 240DB | Smoke Screen S55 |
| Power Consumption | 40 W (average standby); ~350 W during firing | Approx. 315–350 W peak during firing |
| Fog Ejection Speed | Up to 28 m/s | 12–18 m/s |
| Coverage Volume | 3 x 504 m³ in 18 seconds | 400–1,000 m³ in 30 seconds |
| Reaction Time | Instant (<0.1 s) | 0.2–0.5 seconds |
| Refill/Firing Capacity | 25 fog ejections per cartridge | 2–4 fog shots per refill |
| Fog Density | High-opacity, dry fog | Density glycol-based fog |
| Battery Backup | 2+ hours | Optional battery |
| Maintenance | Minimal; cartridge replacement | Fluid refill, filter checks |

# 4. Fog Characteristics

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| Feature | Fog Bandit | Smoke Screen |
| Fog Composition | Food-grade glycol mix (dry fog) | Glycol-water-based fog |
| Visibility Impact | ≤10 cm | >20–30 cm |
| Residue | No residue | Minimal residue |
| Dispersal Pattern | High-pressure, multi-directional | Medium-pressure, multi-directional |

# 5. Security Integration

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| Feature | Fog Bandit | Smoke Screen |
| Alarm System Integration | Yes (wired or wireless) | Yes |
| Remote Activation | Yes (optional via IP) | Yes |
| Diagnostic/Monitoring | Onboard LED, optional IP | IP and local tools |

# 6. Compliance and Safety

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| Standard | Fog Bandit | Smoke Screen |
| EN 50131-8 | ✔️ Compliant | ✔️ Compliant |
| Health & Safety Approval | ✔️ Certified Food-grade fog | ✔️ Certified fluid |
| CE/EMC Certifications | ✔️ Yes | ✔️ Yes |

# 7. Summary & Recommendations

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| Category | Winner | Notes |
| Speed & Reaction | Fog Bandit | Extremely rapid ejection and readiness |
| Energy Efficiency | Fog Bandit | Low standby power |
| Maintenance Simplicity | Fog Bandit | Cartridge-based system |
| Installation Flexibility | Fog Bandit | More models and sizes available |
| System Intelligence | Smoke Screen | Advanced diagnostics and control |

# 8. Conclusion

Fog Bandit excels in speed, efficiency, and ease of use, making it ideal for rapid theft scenarios (e.g., ATMs, jewelry stores, home security).