

## System Design - System Category & Selection

The general steps for the Designer are:

- Ensure the Fire Risk assessment is complete
- Confirm level of protection or system category is correct (listed below)
- Confirm the 'Cause & Effect'
- Agree any 'Variations' with all relevant parties
- Complete the specification drawings
- Sign off the G1 Design Certificate required within BS5839-1:2002

System Categories are fully described within BS5839-1:2002 and vary depending on the Risk. These are commonly referred to as Category M, L5, L4, L3, L2 or L1 or Life protection of P1 or P2 for Property protection. Below is a small portion of advice taken from notes associated with one of the Approved CPD training seminars that relate specifically to fire detection design.

## Detector Selection & Siting

**Selection and siting of sensors (for further advice please refer to clauses 21 & 22 of BS 5839-1:2002)**

The objective is to select the correct sensor for the appropriate application, to provide the earliest warning of fire without the risk of a false alarm. It is therefore worth trying to visualise the type of fire that is likely to occur in a particular room or area and also to familiarise oneself with the application and the risks that could give rise to a false alarm.

It should also be remembered that a Vigilon system can incorporate a whole range of different sensors using S-Quad multi-sensors. These can be set up for different applications and can be switched from 'state to state' should particular risks be present for short periods of time.

This should be read in conjunction with the application/risk charts, please visit [www.gent.co.uk](http://www.gent.co.uk) for the S-Quad Selector, which is available to download.

Obviously conditions may vary depending on the particular application and if there are any doubts, please contact Gent for further consultation.

## Voice Alarm (VA)

Voice messages are more effective than tone signals alone.

Research has shown in an alarm situation:

- 13% of people react in timely manner to bell tones
- 75% people reacted quickly to a voice message explaining the nature of the emergency

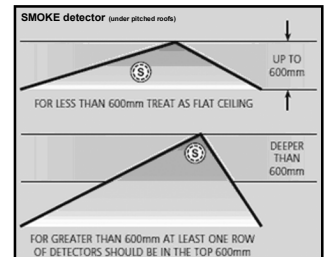
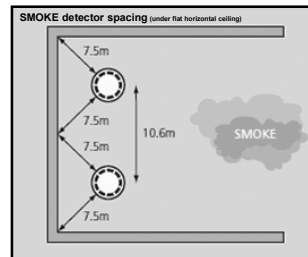
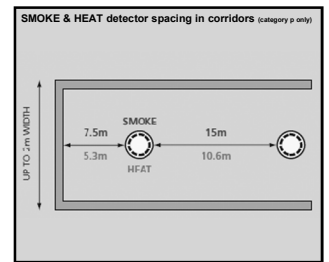
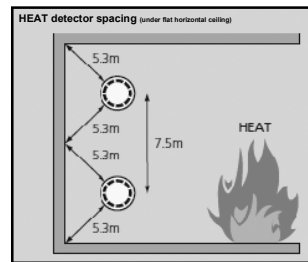
In addition to this it was found that people will naturally use the entrance they used to enter the building to leave even if it is not the closest.

VA systems provide clear directions to people in the building in an emergency. Live messages giving exact instructions in a complex building where people are not familiar with the layout meeting the needs for general communication.

Gent by Honeywell will provide FREE advice on Fire Detection and Voice Alarm system design recognising the responsibilities imposed on the Designer. This is available through our Network of Approved System Integrators.

The service our Sales Support Team can offer is:

- Fire Detection design & application advice
- Voice Alarm design
- Acoustic design & modelling using the Ulysses tool
- Central Battery & Static Inverter design, sales support & commissioning
- Aspirating design & application support
- Factory Acceptance Testing
- Site survey & application support
- Site training



### S-QUAD SELECTOR

**KEY**

H	Heat	OH	Dual Optical Heat
O	Optical	O+CO	Dual Optical Heat + CO
OH	Optical Heat	CO	Carbon Monoxide
O+OH	Optical Heat	CO	Optical Heat

CLICK ON RISKS OR APPLICATIONS

APPLICATIONS	RISKS
Bedroom	Bedroom
Bedroom with adjacent bathroom	Boiler room with coal or coke
Boiler room with gas/oil/electricity	Boiler room with gas/oil/electricity
Car park (enclosed)	Changing rooms alongside showers etc.
Clean data processing room	Corridors, stairwell or internal passageway
Electrical switch or plant rooms	Flour Mill
Flour Mill	Garage work area
Garage work area	Kitchen - bare commercial
Kitchen - bare commercial	Kitchen - small domestic
Kitchen - small domestic	Laundry room - small low ceiling
Laundry room - small low ceiling	Library
Library	Normal office or workshop area
Normal office or workshop area	Prison/secure accommodation
Prison/secure accommodation	Room with gas fire
Room with gas fire	Room with open wood fire/coal fire
Room with open wood fire/coal fire	Scientific laboratory
Scientific laboratory	Store room
Store room	Warehouse
Warehouse	Warehouse loading bay

**BEDROOM WITH ADJACENT BATHROOM**

Preferred State ▶ OH ▶ State 8 ▶ Delayed Medium Optical + A1 Heat  
 Alternative State 1 ▶ OH CO ▶ State 0 ▶ Medium Optical + A1 Heat + Medium CO  
 Alternative State 2 ▶ O+HCO ▶ State 9 ▶ A1 Heat + Medium CO

PART NUMBERS    HELP    QUIT

