

Will my smoke/haze machine set off smoke detectors?

Question:

Will my smoke/haze machine set off the smoke detectors in my venue?

Answer:

Possibly...

Smoke detectors are designed to detect small particles in the air using (usually) one of two methods:

Photoelectric type - Photoelectric-type alarms aim a light source into a sensing chamber at an angle away from the sensor. Smoke enters the chamber, reflecting light onto the light sensor; triggering the alarm.

Ionization type – these have a small amount of radioactive material between two electrically charged plates, which ionizes the air and causes current to flow between the plates.

When smoke enters the chamber, it disrupts the flow of ions, thus reducing the flow of current and activating the alarm.

Different manufacturers of smoke detectors will produce different sensitivity levels of detection – some good...some bad!

Depending on the placement of the installed smoke detector it **WILL** detect the artificial smoke/haze particles in the air...this is the smoke detector doing a good job.

If the detector is installed further away from the location of the smoke output then there is a possibility that the smoke/haze will have dispersed by the time it reaches the smoke detector (or an open window/door may blow the smoke away from the detector location)...but if smoke is not reaching the detector due to air flow...then you may want to reconsider the current location (or quantity) of your smoke detection systems.....you may have a fire detection risk!!!

Depending on the fluid type you are using in your machine (only use the recommended fluid types) and low volume trigger levels you may find that the smoke is dispersing faster than it takes to reach the smoke detector and will not set the alarm off...or adversely you may be using a fluid that is designed to hang around a long time (like high density fluid) and over saturating the room with smoke levels ('trigger happy' DJ?) and this may also cause the smoke to travel much further into locations within the venue that you would not expect (adjoining rooms for example)...triggering detectors in different zones.

The only solution to 100% avoid triggering a smoke alarm is to turn the detectors off...**BUT THIS IS NOT ADVISED UNLESS YOU HAVE A SUITABLE SECONDARY FIRE DETECTION SYSTEM IN PLACE (LIKE HEAT SENSORS FOR EXAMPLE)**. Some venues have permanent live heat detectors and a switchable smoke detection system in their main venue rooms (other rooms still permanently active)...where the smoke detectors are **ONLY** turned off during events (leaving the heat detectors live) and are turned back on again soon after the event (giving both heat and smoke detection).

CHECK WITH YOUR LOCAL FIRE DEPARTMENT, BUILDING REGULATORS AND INSURANCE COMPANIES ETC.. TO SEE WHAT SOLUTION CAN BE PROVIDED IN ACCORDANCE WITH LOCAL GUIDANCE/LAWS/RISK REGARDING SMOKE DETECTORS/FIRE DETECTION SYSTEMS IN YOUR VENUE.

Also...Please be wary of any company that states that their smoke machines/fluid **will not trigger smoke detectors – see above for reasons why this may not be the case..

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