

## TOP TIPS

# Six Ways Fire Departments Can Benefit From Affordable Digital Fire Station Alerting

Digital radios were first introduced to the fire service over 30 years ago with the development of P25, a suite of standards created by safety professionals in North America to improve intra- and inter-agency communication. P25 was also intended to provide user-friendly equipment to public safety agencies and transition departments from analog VHF and UHF radios to digital radio systems.

While most departments transitioned their radios to digital, it is not just the handheld radios that need to be upgraded — fire station alerting systems also require upgrading to P25 digital protocols. For any department, this can be a massive undertaking that runs between \$50,000 to \$100,000 to outfit each station with the CAD and IP connection needed to run a high-end alerting system. During installation, station activities are often disrupted as well.

Due to this high cost, many departments have chosen not to upgrade their stations and instead set up a pager or mobile radio with a speaker to use as an alerting system. There are affordable fire station alerting systems available that cost about the same amount as a mobile radio. These affordable P25 fire station alerting systems are easy to install and offer many of the same features as the \$50,000 to \$100,000 systems.

If cost has been preventing you from converting your fire station alerting system from analog to digital, here are six reasons you should upgrade your station, whether you're looking for an IP-based system with fully integrated lights and a sound system or a more affordable system that will work with your current equipment.

1

### Radio System Reliability

P25 fire station alerting systems are easier to maintain than analog systems. For many legacy analog systems that are 30 to 50 years old, replacement parts are either difficult to find or obsolete, whereas components for more advanced digital technology are readily available.

2

### Reduced Response Time

Upgrading to a P25 fire station alerting system allows faster communication between dispatch and the fire station. Older analog systems may have a slower relay and a loss of performance, which can cost precious time during an emergency.

## 3

**Improved First Responder Sleep**

Newer P25 systems can be programmed to turn on the lights in the specific dorm rooms of firefighters or medics, depending on who is being called out.

An on-duty/off-duty monitor can limit the calls heard at a particular station at night to those only for that station's crew by moving the monitor position switch to "off-duty." During the day, the crew can move the position switch to "on-duty" and listen to the calls for their response area.

Tactile (vibration) alerts can wake only the crew assigned to the call, allowing others to continue resting, even in shared bunk rooms.

## 4

**Heart Smart Alerting**

Cardiac risk increases during alarm response, and this has to do with the auditory startle response of loud alerting systems. Firefighters are up to 14.1-times more likely to die from a heart attack during alarm response than during non-emergency duties\*.

Focused on improved first responder health, P25 fire station alerting systems can reduce the startle response when alerting a crew for a call by slowly increasing the tone volume, having different tones for different types of calls, or slowly increasing the lighting in the dorm rooms at night.

Digital alerting systems can also work with a wireless alerting system that provides each firefighter with wristbands and bedside devices that vibrates and light up the room to notify them of a call in a less stressful, and more effective manner.

*\*Source: : Kales, S., et al. (2007). Heart disease deaths among firefighters. New England Journal of Medicine, 356 (24), 2535–2537.*

## 5

**Station Controls**

Zoned alerting, on-duty/off-duty monitoring, and heart-smart alerting are just a few examples of some of the station controls that can be programmed into a P25 station alerting system. The system can also open the bay doors, turn off appliances, or start a count-up timer for the time since the call came in — new options are continually being added.

## 6

**Long-Term Cost Savings**

Frequently, fire stations and weather sirens are the last systems still on analog radio frequencies. The long-term cost savings that the state or county could achieve by moving the department to a P25 fire station alerting solution — and moving the weather sirens to a digital frequency — could amount to hundreds of thousands of dollars. The county could stop paying for the maintenance of both analog and digital networks and could take down the old analog network altogether.

Public safety communication interoperability has been a recognized issue for decades, and the development of the P25 digital standards encouraged departments to move to digital radio communication, but there are a significant number of departments that have not upgraded their fire station alerting to the P25 digital protocol. This prevents those departments from taking advantage of advancements in alerting that are better for firefighters' sleep and overall health, as well as features that make getting out the door to a call faster and easier. Multiple price points for fire station alerting upgrades now make it worth considering for all departments.

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