

## Overview

In today's world, emergency preparedness is an important topic. Too often, individuals who are deaf or hard of hearing do not have access to emergency alerts. Visual emergency alerting systems provide equal access and allow people who are deaf or hard of hearing to evacuate safely during emergencies. Both the ADA and Section 504 of the Rehabilitation Act also mandate reasonable accommodations, which include visual fire alarms.



## What type of alarm system is best for individuals who are deaf or hard of hearing?

The Federal Emergency Management Agency, ADA Standards for Accessible Design, and Uniform Federal Accessibility Standards provide the following insights regarding standard practices:

- The ideal solution is to install the fire alarm so it is hard-wired into the existing building system, with a battery back-up.
- There should be both audible and visual alerts with the audible alerts not to exceed 110db.
- If the alarm's sound pattern is of the T-3 variety, then a bed-shaker alert system can also be used in conjunction with the hard-wired alarm.

## Why is a hard-wired alarm important? Can't I just install a stand-alone battery operated alarm?

The intent of hard-wired alarms is to communicate the fact that there is smoke and/or fire to all of the alarms in a building. An individual who is deaf or hard of hearing would be alerted no matter where the fire or individual is located.

Stand-alone alarms remain silent until the fire/smoke conditions actually reach the physical location where the alarm is located. For example, if stand-alone alarm is installed on the first floor and there is a fire on the third floor of a building, the stand-alone alarm would remain silent until the fire physically gets very close to the alarm. The resulting delay in becoming aware of the situation could be more dangerous for individuals who are deaf or hard of hearing, as there would be less time to react to the emergency.

Additionally individuals who are deaf or hard of hearing are only alerted if they are in the same physical location as the stand-alone alarm, not if they are in other areas of the building.



# Visual Fire Alarms

## Facts/Laws

**The provision of fire alarms is regulated by several different federal laws. These include:**

### - 2010 ADA Standards for Accessible Design

702.1 General. Fire alarm systems shall have permanently installed audible and visible alarms complying with NFPA 72 (1999 or 2002 edition) (incorporated by reference, see “Referenced Standards” in Chapter 1), except that the maximum allowable sound level of audible notification appliances complying with section 4-3.2.1 of NFPA 72 (1999 edition) shall have a sound level no more than 110 dB at the minimum hearing distance from the audible appliance. In addition, alarms in guest rooms required to provide communication features shall comply with sections 4-3 and 4-4 of NFPA72 (1999 edition) or sections 7.4 and 7.5 of NFPA 72 (2002 edition).

### - The Uniform Federal Accessibility Standards

4.28.3\* VISUAL ALARMS. If provided, electrically powered internally illuminated emergency exit signs shall flash as a visual emergency alarm in conjunction with audible emergency alarms. The flashing frequency of visual alarm devices shall be less than 5 Hz. If such alarms use electricity from the building as a power source, then they shall be installed on the same system as the audible emergency alarms.

4.28.4\* AUXILIARY ALARMS. Accessible sleeping accommodations shall have a visual alarm connected to the building emergency alarm system or shall have a standard 110-volt electrical receptacle into which such an alarm could be connected. Instructions for use of the auxiliary alarm or connection shall be provided.

## Resources

The National Fire Protection Association: Safety Materials for people who are deaf or hard-of-hearing

<https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Specific-groups-at-risk/People-with-disabilities/Educational-materials/People-who-are-deaf-or-hard-of-hearing>