



Audio Enhancement® and UL2572

Overview

UL2572 is a testing and certification criteria standard published by Underwriters Laboratory (UL). UL is also responsible for testing any hardware or software system that wants to be certified to this standard. UL2572 includes requirements for various types of mass notification services such as In-Building mass notification systems. These types of systems are used to provide information and instructions to occupants in a building or other space using voice communication, visible signaling and other communication methods. In education, these are typically associated with the fire alarm. This standard, however, is not the standard that defines the fire alarm. In recent years UL2572 has started to be adopted to expand automated voice communications from the fire alarm, where a UL2572 certified system is utilized to deliver emergency messaging in replacement of signaling directly from the fire alarm.

Reasons for this Function

- 1 There are times when the fire alarm system may be providing conflicting signaling to the occupants of a building vs what signaling needs to happen. (i.e. the fire alarm initiated nefariously from a pull station causing the occupants to evacuate the building when in fact in order for them to remain safe the correct action would be to remain where they are.)
- 2 The new requirement with the code (NFPA 72), is that fire alarm systems require voice-based instruction vs the traditional horn style. Most older systems do not have the capabilities of complying to this requirement without costly replacements. One of the ways of accomplishing this is tying the fire alarm system into a UL2572 certified system.

Compliance vs. Certification to UL2572

There are two distinct methodologies to meet the goals that are set forth in the UL2572 standard. The goal of the standard is to make sure that all the occupants of a building can hear and understand the emergency messaging that is being provided.

Compliance

The EPIC System (Education Paging & Intercom Communications)® from Audio Enhancement® is in compliance with the goals of the UL2572 standard because the EPIC System has the ability to mute all local audio across the entire system when provided a signal from the fire alarm, or other UL2572 certified system.

When the emergency messaging is being provided by the UL2572 certified system, Audio Enhancement is not interfering in any way with the delivery of that critical information to the occupants of the building. This makes the EPIC System compliant with the standard. The requirement is under the current code (meaning this primarily affects new construction and major renovation projects) that all audio must mute to give priority to the voice evacuation system. In this scenario this means the paging system as well as classroom audio must mute. EPIC does comply with this requirement if the Fire Alarm system can provide a Normally Open output to the EPIC System.

The second scenario where EPIC is in compliance with UL2572 is using EPIC for the everyday intercom, paging and bells functionality, but doing so by sending the audio through the fire alarm speakers in the common zones. In this scenario, EPIC provides the intercom, paging, bells interface signal feeds into the Fire Alarm System. The integrated common zones spaces are served by the fire alarm voice evacuation capable speakers. (Must be certified to by UL.) EPIC provides the audio signal coming out of an MS-300 (1 per zone) as a line level feed into the fire alarm system. A series of contact closures is then used for zone selection, and to provide the cut-off when the fire alarm needs to take priority. EPIC can be utilized in this scenario allowing the day-to-day functions of EPIC to operate and in an emergency the fire alarm would supersede EPIC.

Certification

The EPIC System is NOT certified by UL to be a UL2572 mass notification system. We have not submitted the system in its entirety to the testing lab had it officially certified. Although we can be in compliance with the current standards, we cannot be the system that is delivering the mass notification information during a time of emergency.

Summary

The Audio Enhancement system is in compliance with the UL2572 standard, but we are not certified to meet that standard. The most reliable and simplest way for the EPIC System to be utilized in conjunction with a certified Fire Alarm system, and/or Certified UL2572 system is for that system to provide us with a contact closure, and have EPIC mute during their emergency announcements.

Definitions

NFPA – National Fire Protection Association – The National Fire Protection Association (NFPA) is a global self-funded nonprofit organization, established in 1896, devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. NFPA is widely known as a codes and standards organization, these published code's get adopted into State Statute and become part of the law. Compliance with the NFPA is a shall not a should. These codes are on 3 year revision cycles and typically states adopt them 1-3 years after publishing.

NFPA 70 – National Electrical Code, AKA NEC.

NFPA 72 – National Fire Alarm Signaling Code

Underwriters Laboratory (UL) – UL is an independent company that creates standards and criteria on systems performance as well as safety. Many of these UL standards are referenced in published code documents like NFPA 70 (National Electrical Code), NFPA 72 (National Fire Alarm Signaling Code).

Code – A code is an enforceable requirement that protects life and property and is part of the law of a state. Code's are typically written by an association of industry professionals such as NFPA.

Standard – A standard is a set of performance criteria, typically created by a professional industry organization, like BICSI. Standards define how the system should perform and what criteria exist that are not necessarily relating to how safe the system is but how it can perform.

Shall – Must happen, violating items that are a shall result in enforcement by monetary penalties, loss of licensure and up to criminal action. Code's keep people safe.

Should – Recommendations and best practices, these items are quality of performance and professionalism of install. A Should statement or requirement can keep you from getting paid but you won't end up in prison.

Authority Having Jurisdiction (AHJ) – This is a building official that is empowered via State Statute to interpret and enforce the code. They also provide permitting to installs and inspections on those installs to compliance to the code. 99.9% of the time the AHJ has the final say.

Mass Notification System (MNS) – These systems are defined in the code as a system that operates along side of the fire alarm system or in replacement of the fire alarm for signaling.