

Alabama Department of Public Health, Technical Services Unit

Compatibility of Fire Alarm System Components in Health Care Facilities

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Is a building's fire alarm system, having multiple control panels, required to function as a single system? According to NFPA 72, paragraph 3-11, the answer is "yes." What does "function as a single system" mean?

One reason this section was placed in NFPA 72 was for the situation of an existing building, with an old fire alarm system, which has a new addition constructed. If the old fire alarm system remains, it and the new fire alarm system in the addition "shall be arranged to function as a single system." The Handbook commentary and A-3-11 state that this paragraph is intended to address the interconnecting of two or more control panels. Notice that the commentary on A-3-11 states the intent that "the new wing's fire alarm system must operate as if it were part of the original system." This does not mean that the old system must operate like the new system.

For instance, functions such as door magnet release must be simultaneously performed properly by each panel for its respective portion of the building. If either panel goes into alarm, it must signal the other panel, which will also go into alarm. If the panels are silenced, and the new panel receives a second initiation, it goes into alarm again. The old panel should continue to show an alarm condition, but probably is not capable of resounding the alarm. This is acceptable. Trouble and supervisory signals generated at the old panel must be sent to the new (master) panel (NFPA 3-11.2.1). An old panel may serve as the master panel if it can perform the functions required by current code, since it must support the newly installed portion of the alarm system.

Functions such as silencing and resetting of alarms, when performed at a panel, should not be required to work simultaneously on all panels. Sometimes this may require more than one staff member to accomplish. If "they shall be arranged to function as a single system" means that the entire facility fire alarm system must function in the same manner throughout, like a new system, there will be few cases where Section 3-11 can be met without replacing the original panels. I do not believe this is the intent of the Code.