



NATIONAL FIRE ALARM CODE (NFPA-72) Fire Alarm System Testing



Six Reasons To Test & Inspect Your Fire Alarm Systems Regularly:

Lives are at stake! Your fire alarm system will only operate properly if it is maintained and some impairments will not be obvious without testing!

To meet the requirements of your local building department, fire inspectors, and even your insurance carrier.

Your insurance carrier may reject your claim if you do not have proof of complete annual inspections.

To limit your liability for any potential injuries suffered by tenants, employees, or guests to your business.

To assure that the system does not create nuisance alarms that waste Fire Department resources. This could put others' lives in jeopardy and many jurisdictions will charge the building owner for multiple nuisance alarms.

It is required by the National Fire Alarm Code! (NFPA 72)— **IT'S THE LAW**

As a building owner/business owner, it is important for you to have designated persons with some knowledge of the fire alarm system. At the very least these people should be able to recognize when the system is impaired, understand how to reset the system, and know when to call for service. Building maintenance personnel or other trained people are often able to do visual inspections but yearly extensive testing must be done by a **qualified state licensed inspector**. Copies of a standard Inspection and Testing Form may be obtained at www.NFPA.org.

You will need a copy of the completed Inspection and Testing Form for yourself and your insurance carrier. A copy must be sent to local Fire Department.

A fire alarm system is comprised of many different components, each with different testing procedures and frequencies. Please see the list below for testing frequencies of some of the more common components.

NFPA-72 Fire Alarm Testing Frequency (Summary)

Please be aware that this list is abbreviated for clarity. Please refer to NFPA-72 for the complete list of devices, test frequencies, and procedures.

Monitored Fire Alarm Panels

Weekly Requirement

Visual inspection of panel trouble signal led's.

Quarterly Requirement

Visual inspection of all fire sprinkler devices connected to the alarm. This includes water flow switches and valve tamper switches.
Test of fire pump monitored points (loss of phase, phase reversal, pump running etc...)

Semiannual Requirements

Test of sprinkler waterflow switches (flow water or manually trip flapper)

Test of sprinkler valve tamper switches (operate valves)

Visual inspection lead-acid battery (swelling or loose connections)

Test batteries - load voltage

Annual Requirements

Test & visual inspection of panel functionality, LED's, fuses, etc...

Test panel battery charger

Battery discharge test

Test & visual inspection of horns, strobes, chimes, & bells etc...

Test & visual inspection of smoke detectors

Test & visual inspection of heat detectors

Test & visual inspection of duct smoke detectors

Test & visual inspection of Electromechanical Releasing Devices (Solenoid)

Test & visual inspection of Voice Evacuation equipment

Other

Replace sealed lead-acid batteries every 5 years or as test results require.

Smoke Detector Cleaning: as test results require. Many newer fire alarm panels are capable of issuing maintenance alerts and adjusting sensitivity as the detector becomes dirtier. Both of these features reduce false alarms.

Smoke & heat detector replacement recommended after 10 years of service.

Unmonitored Fire Alarm Panels**Weekly Requirement**

Visual inspection of panel lamps & led's, fuses, primary power supply, and interface equipment.

Quarterly Requirement

Test of panel lamps & led's, fuses, primary power supply, and interface equipment.

Visual inspection of all fire sprinkler devices connected to the alarm. This includes water flow switches and valve tamper switches.

Test of fire pump monitor points (loss of phase, phase reversal, pump running etc...)

Semiannual Requirements

Test of sprinkler waterflow switches (by flowing water)

Test of sprinkler valve tamper switches

Visual inspection lead-acid battery (swelling or loose connections)

Test batteries - load voltage

Annual Requirements

- Battery discharge test (30 minutes)
- Test & visual inspection of horns, strobes, chimes, & bells etc...
- Test & visual inspection of smoke detectors
- Test & visual inspection of heat detectors
- Test & visual inspection of duct smoke detectors
- Test & visual inspection of Electromechanical Releasing Devices (Solenoid)
- Test & visual inspection of Voice Evacuation equipment

Other

- Replace sealed lead-acid batteries every 5 years or as test results require.
- Smoke Detector Cleaning: as test results require. Many newer fire alarm panels are capable of issuing maintenance alerts and adjusting sensitivity as the detector becomes dirtier. Both of these features reduce false alarms.
- Smoke & heat detector replacement recommended after 10 years of service.

Please be aware that the above list is abbreviated for clarity. Please refer to NFPA 72 for the complete list of devices, test frequencies, and procedures.



NFPA National Fire Alarm Code NFPA-72 (Complete Testing Frequencies)

Table 10.4.3 - Testing Frequencies

| COMPONENT | INITIAL/ REACCEPTANCE | MONTHLY | QUARTERLY | SEMI- ANNUALLY | ANNUALLY |
|--|--------------------------|---------|-----------|-------------------|----------|
| 1 Control Equipment - Building systems connected to supervising station | | | | | |
| a) Functions | X | - | - | - | X |
| b) Fuses | X | - | - | - | X |
| c) Interfaced equipment | X | - | - | - | X |
| d) Lamps and LEDs | X | - | - | - | X |
| e) Primary (main) power supply | X | - | - | - | X |
| f) Transponders | X | - | - | - | X |
| 2 Control equipment - Building systems not connected to supervising station | | | | | |
| a) Functions | - | - | X | - | - |
| b) Fuses | - | - | X | - | - |
| c) Interfaced equipment | - | - | X | - | - |
| d) Lamps and LEDs | - | - | X | - | - |

| | | | | | | |
|----|---|----------------------------------|----------------|------------------|---------------------------|-----------------|
| 17 | Interface equipment | X | - | - | - | X |
| 18 | Special hazard equipment | X | - | - | - | X |
| 19 | Alarm notification appliances | | | | | |
| | a) Audible devices | X | - | - | - | X |
| | b) Audible textual notification appliances | X | - | - | - | X |
| | c) Visible devices | X | - | - | - | X |
| | COMPONENT | INITIAL/ REACCEPTANCE | MONTHLY | QUARTERLY | SEMI- ANNUALLY | ANNUALLY |
| 20 | Off-premises transmission equipment | X | - | X | - | - |
| 21 | Supervising station fire alarm systems - transmitters | | | | | |
| | a) Digital alarm communicator transmitter (DACT) | X | - | - | - | X |
| | b) Digital alarm radio transmitter (DART) | X | - | - | - | X |
| | c) McCulloh transmitter | X | - | - | - | X |
| | d) Radio alarm transmitter (RAT) | X | - | - | - | X |
| 22 | Special procedures | X | - | - | - | X |
| 23 | Supervising station fire alarm systems - receivers | | | | | |
| | a) Digital alarm communicator receiver (DACR) | X | X | - | - | - |
| | b) Digital alarm radio receiver (DARR) | X | X | - | - | - |
| | c) McCulloh systems | X | X | - | - | - |
| | d) Two-way RF multiplex | X | X | - | - | - |
| | e) Radio alarm supervising station receiver (RASSR) | X | X | - | - | - |
| | f) Radio alarm repeater station receiver (RARSR) | X | X | - | - | - |
| | g) Private microwave | X | X | - | - | - |

