

FIRE DETECTION, ALARM AND MASS NOTIFICATION SYSTEMS

Inspection, testing, and maintenance of fire detection, alarm and Mass Notification systems shall be performed in accordance with the manufacturer's instructions and NFPA 72 (latest edition). The following list highlights minimum requirements for the essential care of fire alarm systems. This list, however, is not meant to replace manufacturer's instructions and updated code requirements. This data is based on the 2013 edition.

NFPA 72 Table 14.3.1: Visual Inspection

ITEM	FREQUENCY	TABLE ITEM NUMBER
All Equipment	Annually	1
Control Equipment (fire alarm systems monitored for alarm, supervisory, and trouble signals)		2
Fuses	Annually	
Interfaced equipment	Annually	
Lamps and LEDs	Annually	
Primary (main) power supply	Annually	
Trouble signals	Semiannually	
Supervising Station Alarm Systems - Transmitters		4
Digital alarm communicator transmitter (DACT)	Annually	
Digital alarm radio transmitter (DART)	Annually	
McCulloh	Annually	
Radio alarm transmitter (RAT)	Annually	
All other types of communicators	Annually	
In-Building Fire Emergency Voice/Alarm Communications Equipment	Semiannually	5
Batteries		9
Lead-acid	Monthly	
Nickel-cadmium	Semiannually	
Primary (dry cell)	Monthly	

NFPA 72 Table 14.3.1: Visual Inspection

ITEM	FREQUENCY	TABLE ITEM NUMBER
Sealed lead-acid	Semiannually	
Remote Annunciators	Semiannually	11
Notification Appliance Circuit (NAC) Power Extenders	Annually	12
Remote Power Supplies	Annually	13
Transient Suppressors	Semiannually	14
Fiber-optic cable connections	Annually	16
Initiating Devices		17
Air sampling – general	Semiannually	
Air sampling – sampling system piping and sampling ports	At time of installation	
Duct detectors – general	Semiannually	
Duct detectors – sampling tube	At time of installation	
Electromechanical releasing devices	Semiannually	
Fire extinguishing system(s) or suppression system(s) switches	Semiannually	
Manual fire alarm boxes	Semiannually	
Heat detectors	Semiannually	
Radiant energy fire detectors	Quarterly	
Video image smoke and fire detectors	Quarterly	
Smoke detectors	Semiannually	
Project beam smoke detectors	Semiannually	
Supervisory signal devices	Quarterly	
Waterflow devices	Quarterly	
Combination Systems		19
Fire extinguisher monitoring devices/systems	Semiannually	
Carbon monoxide detectors/systems	Semiannually	

NFPA 72 Table 14.3.1: Visual Inspection

ITEM	FREQUENCY	TABLE ITEM NUMBER
Fire Alarm Control Interface and Emergency Control Function Interface	Semiannually	20
Guard's Tour Equipment	Semiannually	21
Notification Appliances		22
Audible appliances	Semiannually	
Audible textual notification appliances	Semiannually	
Visible appliances – general	Semiannually	
Visible appliances – candela rating	At time of installation	
Exit Marking Audible Notification Appliances	Semiannually	23
Area of Refuge Two-Way Communication System	Annually	25
Supervising Station Alarm Systems – Receivers		27
Signal receipt	Daily	
Receivers	Annually	
Public Emergency Alarm Reporting System Transmission Equipment		28
Publicly addressable alarm box	Semiannually	
Auxiliary box	Annually	
Master box – manual operation	Semiannually	
Master box – auxiliary operation	Annually	
Mass Notification System (monitored for integrity)		30
Control equipment		
Fuses	Annually	
Interfaces	Annually	
Lamps/LEDs	Annually	
Primary (main) power supply	Annually	

NFPA 72 Table 14.3.1: Visual Inspection

ITEM	FREQUENCY	TABLE ITEM NUMBER
Secondary power batteries	Annually	
Initiating devices	Annually	
Notification appliances	Annually	

NFPA 72 Table 14.4.3.2: Testing

ITEM	FREQUENCY	TABLE ITEM NUMBER
All Equipment	At time of installation	1
Control Equipment and Transponder		2
Functions	Annually	
Fuses	Annually	
Interfaced equipment	Annually	
Lamps and LEDs	Annually	
Primary (main) power supply	Annually	
Fire Alarm Control Unit Trouble Signals		3
Audible and visual	Annually	
Disconnect switches	Annually	
Ground-fault monitoring circuit	Annually	
Transmission of signals to off-premises location	Annually	
Supervising Station Alarm Systems – Transmission Equipment		4
All equipment	Quarterly ¹	
Digital alarm communicator transmitter (DACT)	Quarterly ¹	
Digital alarm radio transmitter (DART)	Quarterly ¹	
McCulloh transmitter	Quarterly ¹	
Radio alarm transmitter (RAT)	Quarterly ¹	

¹ Testing frequency increased to quarterly due to history of trouble contacts being disconnected.

NFPA 72 Table 14.4.3.2: Testing

ITEM	FREQUENCY	TABLE ITEM NUMBER
Performance-based technologies	Quarterly ²	
Emergency Communications Equipment		5
Amplifier/tone generators	Annually	
Call-in signal silence	Annually	
Off-hook indicator (ring-down)	Annually	
Phone jacks	Annually	
Phone set	Annually	
System performance	Annually	
Engine-Driven Generator	Monthly	6
Secondary (Standby) Power Supply	Annually	7
Uninterruptible Powers Supply (UPS)	Annually	8
Battery Tests		9
Lead-acid type		
Battery replacement	Annually	
Charger test	Annually	
Discharge test	Annually	
Load voltage test	Semiannually	
Specific gravity	Semiannually	
Nickel-cadmium type		
Battery replacement	Annually	
Charger test	Annually	
Discharge test	Annually	
Load voltage test	Semiannually	
Sealed lead-acid type		
Battery replacement	Annually	
Charger test	Annually	
Discharge test	Annually	
Load voltage test	Semiannually	
Public Emergency Alarm Reporting	Daily	10

² Testing frequency increased to quarterly due to history of trouble contacts being disconnected.

NFPA 72 Table 14.4.3.2: Testing

ITEM	FREQUENCY	TABLE ITEM NUMBER
System – Wired System		
Remote Annunciators	Annually	11
Conductors – Metallic		15
Stray voltage	N/A	
Ground faults	N/A	
Short-circuit faults	N/A	
Loop resistance	N/A	
Circuit integrity	Annually	
Conductors – Non-Metallic		16
Fiber optics	N/A	
Circuit integrity	Annually	
Initiating Devices		17
Electromechanical releasing device (nonrestorable-type link)	Annually	
Electromechanical releasing device (restorable-type link)	Annually	
Fire extinguishing system(s) or suppression system(s) alarm switch	Annually	
Fire-gas and other detectors	Annually	
Heat detectors		
Fixed-temperature, rate-of-rise, rate of compensation, restorable line, spot type (excluding pneumatic tube type)	Annually	
Fixed-temperature, nonrestorable line type	Annually	
Fixed-temperature, nonrestorable spot type	15 years (see method)	
Nonrestorable (general)	Annually	
Restorable line type, pneumatic tube only	Annually	

NFPA 72 Table 14.4.3.2: Testing

ITEM	FREQUENCY	TABLE ITEM NUMBER
Manual fire alarm boxes	Annually	
Radiant energy fire detectors	Semiannually	
Smoke detectors – functional test		
In other than one- and two-family dwellings, system detectors	Annually	
Single- and multiple- station smoke alarms connected to protected premises systems	Annually	
Air sampling	Annually	
Duct type	Annually	
Projected beam type	Annually	
Smoke detector with built-in thermal element	Annually	
Smoke detectors with control output functions	Annually	
Carbon monoxide detectors/carbon monoxide alarms for the purposes of fire detection	Annually	
Initiating devices, supervisory		
Control valve switch	Annually	
High- or low-air pressure switch	Annually	
Room temperature switch	Annually	
Water level switch	Annually	
Water temperature switch	Annually	
Mechanical, electrosonic, or pressure-type waterflow device	Semiannually	
Multi-sensor fire detector or multi-criteria fire detector or combination fire detector	Annually	

NFPA 72 Table 14.4.3.2: Testing

ITEM	FREQUENCY	TABLE ITEM NUMBER
Special Hazard Equipment		18
Abort switch (dead-man type)	Annually	
Abort switch (recycle type)	Annually	
Abort switch (special type)	Annually	
Cross-zone detection circuit	Annually	
Matrix-type circuit	Annually	
Release solenoid circuit	Annually	
Squibb release circuit	Annually	
Verified, sequential, or counting zone circuit	Annually	
All above devices or circuits or combinations thereof	Annually	
Combination Systems		19
Fire extinguisher electronic monitoring device/system	Annually	
Carbon monoxide device/system	Annually	
Interface Equipment	See 14.4.4.4	20
Guard's Tour Equipment	Annually	21
Alarm Notification Appliances		22
Audible	Annually	
Audible textual notification appliances	Annually	
Visible	Annually	
Exit Marking Audible Notification Appliance	Annually	23
Emergency Control Functions	Annually	24
Area of Refuge Two-Way Communication System	Annually	25
Special Procedures		26
Alarm verification	Annually	
Multiplex systems	Annually	

NFPA 72 Table 14.4.3.2: Testing

ITEM	FREQUENCY	TABLE ITEM NUMBER
Supervising Alarm Systems – Receiving Equipment		27
All equipment	Monthly	
Digital alarm communicator receiver (DACR)	Monthly	
Digital alarm radio receiver (DARR)	Monthly	
McCulloh systems	Monthly	
Radio alarm supervising station receiver (RASSR) and radio alarm repeater station receiver (RARSR)	Monthly	
Private microwave radio systems	Monthly	
Performance-based technologies	Monthly	
Public Emergency Alarm Reporting System Transmitting Equipment		28
Publically accessible alarm box	Semiannually	
Auxiliary box	Annually	
Master box		
Manual operation	Semiannually	
Auxiliary operation	Annually	
Low-Power Radio (Wireless Systems)	N/A	29
Mass Notification Systems		30
Functions	Annually	
Fuses	Annually	
Interfaced equipment	Annually	
Lamps and LEDs	Annually	
Primary (main) power supply	Annually	
Audible textual notification appliances (speakers and other appliances to convey voice messages)	Annually	
Visible	Annually	

NFPA 72 Table 14.4.3.2: Testing

ITEM	FREQUENCY	TABLE ITEM NUMBER
Control unit functions and no diagnostic failures are indicated	Annually	
Control unit reset	Annually	
Control unit security	Annually	
Audible/visible functional test	Annually	
Software backup	Annually	
Secondary power test	Annually	
Wireless signals	Annually	
Antenna	Annually	
Transceivers	Annually	