FIRE DEPARTMENT • CITY OF NEW YORK

STUDY MATERIAL FOR THE CERTIFICATE OF FITNESS FOR SUPERVISION OF FIRE ALARM SYSTEMS AND OTHER RELATED SYSTEMS

S-95

ALSO INCLUDED IN THIS BOOKLET YOU WILL FIND THE FOLLOWING:
NOTICE OF EXAMINATION (NOE)

NOTICE OF EXAMINATION

Title: Examination for the Certificate of Fitness for Supervision of Fire Alarm Systems and Other Related Systems

Date of Test: Written tests are conducted Monday to Friday (except legal holidays) 9:00 AM to 2:30 PM.

QUALIFICATION REQUIREMENTS

1. Applicants must be at least 18 years of age.
2. Applicants must have a reasonable understanding of the English language.
3. Applicants must present a letter of recommendation from his/her employer. The letter must be on official letterhead and must state the applicant's full name, character, physical condition, experience, and address of premises where applicant will be employed.
4. Applicant must provide two forms of government issued photo identification, such as a State- issued Drivers' License or Non Drivers License or a passport.

APPLICATION INFORMATION

Application Fees: $25.00 for originals and $15.00 for renewals. The fee may be paid by credit card (no debit), in cash, money order, or personal check payable to New York City Fire Department. The $25.00 fee must be payable by all applicants prior to taking the Certificate of Fitness test. Application forms are available at the Public Certification Unit, 1st floor, 9 Metro Tech Center, Brooklyn, NY 11201.

TEST INFORMATION

Test: The test will be of the written, multiple choice type. A Passing score of at least 70% is required in order to secure a Certificate of Fitness.

About the Study Material

This study material will help you prepare for the examination for the Certificate of Fitness for Fire Alarm Systems. The study material includes information taken from The New York City Fire Code and The Rules of the City of New York (RCNY). The study material does not contain all of the information you need to know to perform your job. It is your responsibility to learn anything else that is needed to work with fire alarm systems. It is also your responsibility to become familiar with all applicable rules and regulations of the City of New York, even if they are not covered in this material. You should become fully knowledgeable in the fire alarm system installed in your building. This study material covers all different types of alarm systems.

All questions on the Certificate of Fitness examination are multiple choices, with four alternative answers to each question. Only one answer is correct for each question. If you do not answer a question your answer will be scored as incorrect. A score of 70% correct is required on the examination in order to qualify for the Certificate of Fitness. Read each question carefully before marking your answer. There is no penalty for guessing.

Sample Questions

1. **Who was the first President of the United States?**

(A) George Jefferson.
(B) George Washington
(C) Bill Clinton.
(D) Barack H. Obama.

The correct answer is "**B**". You would press "**B**" on your computer terminal.

2. **The city in the United States referred to as The Big Apple is:**

(A) Los Angeles.
(B) Buffalo.
(C) Florida.
(D) New York.

The correct answer is "**D**". You would press "**D**" on your computer terminal.

SUPERVISION OF FIRE ALARM SYSTEMS

The new Fire Code that was adopted in July 2008 vastly changed the requirements for the supervision of all fire alarm systems. The old code only required supervision for Interior Fire Alarm Systems. The new code affects thousands of fire alarm systems in buildings which previously did not require a Certificate of Fitness holder (C of F). This Study Material will provide information so that applicants can properly prepare for the examination. The compliance date is no later than July 1, 2009.

All current holders of F-90 C of F must retake this new test. You must take this new test if your premise has other fire alarm systems, i.e.:

1. Standpipe fire pump
2. Sprinkler booster fire pump
3. Standpipe(limited service fire pump)
4. Other (specify)
5. Emergency voice/alarm communication system
6. Fire Department communication system
7. Carbon monoxide alarms and detectors
8. Automatic sprinkler systems
9. Alternative automatic fire-extinguishing system
10. Automatic
11. Manual
12. Manual and automatic
13. Emergency alarm systems (gas detection system)
14. Smoke control systems
15. Fire command center
16. Post-fire smoke purge systems
17. Sub-systems (Range hood, halon and FM200 etc)

All C of f holders should ensure that their respective premises have fire alarm systems approved by The New York City Fire Department. For further questions, you can contact your Building owner or Property Manager. (See sample of the "**Letter of Approval**" at the end of the booklet).

Fire Safety Directors will be required to attend a continuing education course from a school approved by the FDNY that covers this study material of fire alarm systems and other related systems and the new Fire Code requirements in the near future. This is being required since the FSD exam only previously covered Class E Systems (Office Buildings) and Class J Systems (High Rise Hotels). This course will cover other fire alarm systems as referenced above. FSD C of F holders will not be able to renew their existing C of F until

documentation is received. Failure to comply with this requirement may result in penalties including summonses and fines.

FIRE ALARM SYSTEMS

Fire alarm systems are required in many premises as part of a fire protection system. The new Fire Code has expanded the requirement for fire alarm systems which include but are not limited to the following buildings: Office buildings, Hotels, Motels, Schools, Shelters, hospitals, marinas, commercial or apartment buildings which may be high-rise or low-rise, or as specified in New York City Building Code section 309.1. The primary purpose of fire alarm systems within protected premises is to warn building occupants and transmit signals indicating a fire condition to the Fire Department via an FDNY approved central station company.

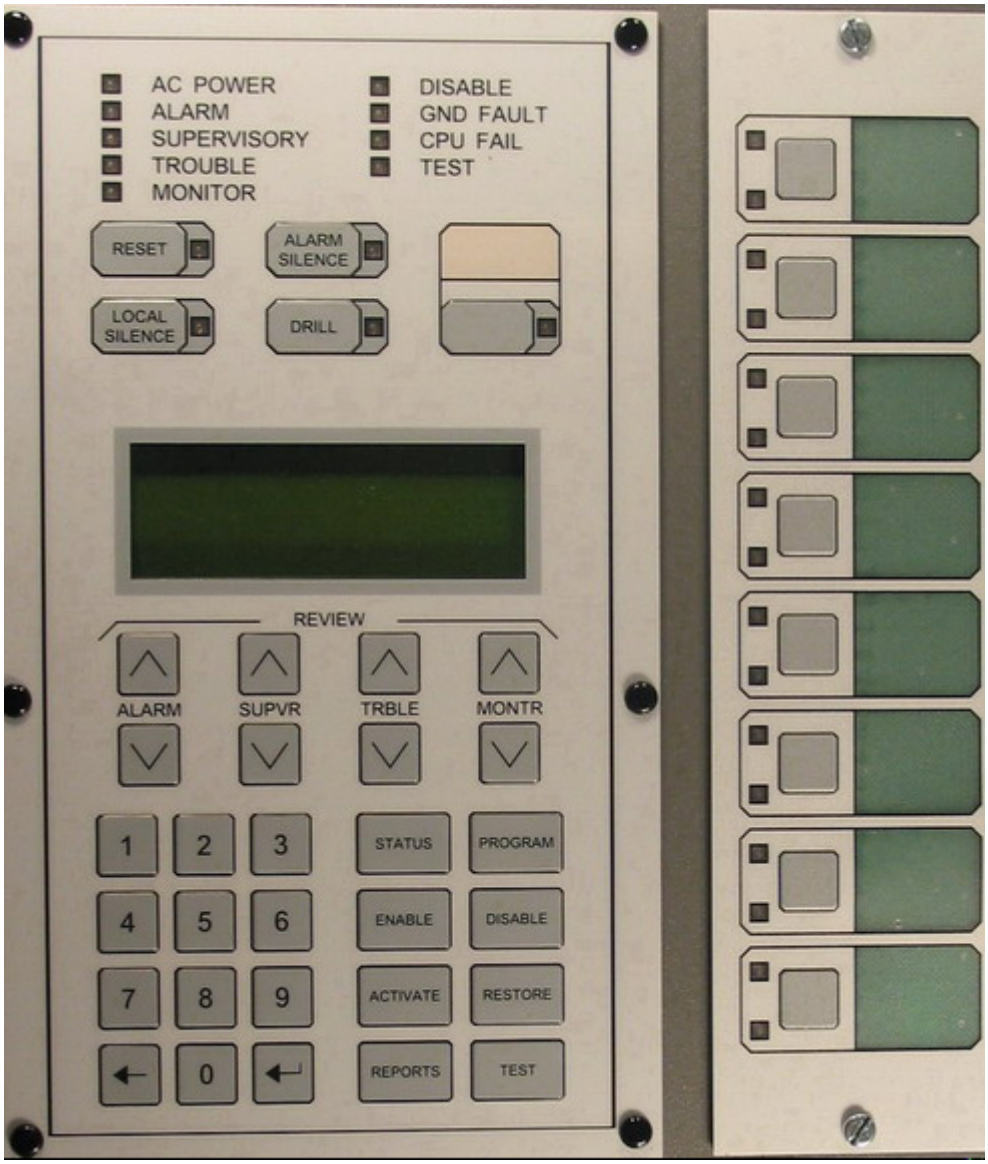
A Fire Alarm System is a system consisting of components and circuits arranged to monitor and annunciate the status of fire alarm and supervisory signal-initiating devices, and to initiate the appropriate response to these signals.

In general, a fire alarm system is classified as automatic, manually activated, or both. If a fire condition occurs, the alarm system warns the occupants within the premises by actuating loud sirens, gongs, bells, speakers, horns and flashing lights (strobes).

The entire fire alarm system must be visually inspected daily. This inspection must be conducted and logged by the Certificate of Fitness holder. Defective equipment must be replaced immediately by authorized service technician.

A fire alarm system consists of the following:

1. **Fire alarm control panel (FACP):** The FACP monitors inputs and control output through various types of circuits. FACP processes all abnormal conditions (alarm, trouble & supervisory) and indicates appropriately based on action programmed for the respective device.



Fire alarm control panel (FACP)

Three types of signals initiated by FACP:

A. Alarm Signal: A signal initiated by a fire alarm initiating device such as a manual fire alarm pull station, automatic fire detector, water flow switch, or other device in which activation is indicative of the presence of a fire or fire signature. When a fire signal is generated, the FACP activates the building audible and visual devices connected to the fire alarm (i.e. horn/strobes), sends a signal to an FDNY approved central station, and actuates control of certain building function which will be described later in this study booklet.

B. Supervisory Signals: A supervisory signal indicates system or device being monitored has been compromised or is in an abnormal state. A supervisory signal will audibly and visually annunciate at the FACP to indicate the supervisory condition needs to be investigated and corrected. The FACP will also send a supervisory signal to an FDNY approved central station.

C. Trouble Signals: A signal initiated by the fire alarm system or device indicative of a fault in monitored circuit or component. A trouble signal will audibly and visually annunciate at the FACP to indicate that the trouble condition needs to be investigated and corrected. Common trouble conditions monitored by the FACP would be battery condition, AC failure, ground fault, open or short circuit on a wire, phone line failure, or internal component failure.

1. A. Acknowledge switch or button

Acknowledge button, also abbreviated as (ACK) is used to acknowledge alarm, trouble or supervisory condition and silence the panel.

The sequence and procedures may differ in every fire alarm system however it is important for the C of F holder, when present and practical, to report to the FACP location whenever the alarm is activated.

1. B. Alarm silence switch or button

The alarm silence switch is used to silence the building audible and visual devices after evacuation is complete while the source of alarm is being investigated. Never reset the fire alarm system until the condition is verified by the FDNY personnel. Depending on the configuration of the alarm system, this function will either silence the system's notification appliances completely, or will silence only the audible alarm, with strobe lights continuing to flash. However, the silence switch does not prevent a signal from being transmitted to a FDNY approved central station company. Audible silence allows for easier communication for emergency responders while responding to an alarm.

1. C. System reset switch or button

This switch is used to reset the fire alarm system after an alarm condition has been cleared. All initiating devices should return to normal condition after manually resetting.

If an initiating device is still in alarm after the system is reset, such as smoke detectors continuing to sense smoke, or a manual pull station still in an activated position, another alarm will be generated.

A system reset is often required to clear supervisory conditions. A system reset does not clear trouble conditions. Most trouble conditions will clear automatically when conditions are returned to normal.

A FACP indicating an alarm signal cannot be reset to "normal" if the device or devices signaling the alarm to the FACP have not returned to "normal" from "alarm".

Do not silence building audible visual device or reset the fire alarm panel until the fire alarm condition is verified by the FDNY personnel.

TYPE OF DEVICE	ACTIVATED BY	TYPE OF SIGNAL	ACTION NORMALLY REQUIRED TO RETURN DEVICE TO "NORMAL" CONDITION
Manual pull station	Manually pulling handle	Fire Alarm	Return handle to normal position. A key or other method may be required to reset the station to a normal condition.
Smoke, beam, and duct detectors	Detection of particles of combustion ***see note below**	Fire Alarm	Smoke detectors will normally reset when the reset button is pressed at the FACP if the condition activating the detector has been cleared.
Heat detectors	Abnormally high temperature (fixed temperature detector) or rapid temperature rise(rate of rise detector)	Fire Alarm	After activation most **Fixed temperature** heat detectors will not self restore and will require replacement by a qualified service technician. **Rate of rise** detectors will normally self-restore after activation.
Water flow device	Flow of water in a sprinkler system	Fire Alarm	Device should return to normal when water ceases to flow.
NOTE: There are other circumstances which will cause a smoke detector to signal an alarm condition when there is none, creating false alarms and causing unnecessary Fire Department response. Common examples would be the entrance of sheet rock dust or dust created by the cutting of wood or sanding of floor during construction or renovations. Care must be taken at all times to protect all smoke detectors from the entrance of foreign particles which may be airborne. Smoke detectors which have not been properly cleaned and maintained will also create false alarms. **Smoke detectors must be cleaned at least once every six month by W-26 C of F. holder.**			

1. D. Lamp test This function is used on some FACP's to check the condition of the light emitting diodes (LEDs) on the FACP.

1. E. Remote Annunciator panel: A remote annunciator panel when installed shall function for visual notification of alarm, supervisory or trouble conditions only.

2. Fire Alarm System Power Supplies

2. A. Primary Power Supply: The main power supply for a fire alarm system shall be provided with a dedicated circuit from local utility.

2. B. Secondary Power Supply: The fire alarm system shall have a secondary power supply which provides power to the alarm system within 10 seconds of failure of the primary power supply. Storage batteries dedicated to the fire alarm system or engine driven generators are acceptable as secondary power source for the system.

3. Types of Fire Alarm Initiating Devices

3. A. Automatic Detection Devices:
Automatic detection devices have sensors which detect heat, smoke or the flow of water in a fire alarm system. Note as follows:

3. A.1. Area Smoke Detector: A smoke detector is a device that detects visible or invisible particles of combustion. Smoke detectors have been shown to be very effective in reducing fire damage and loss of life.

Smoke detector

3. A. 2. Elevator lobby smoke detectors are smoke detectors that when activated will recall elevators automatically to the designated landing.

3. A. 3. Beam detector is used to protect large areas where spot type area smoke detectors are not practical. It is a light beam that when broken by any combustible particles will set the detector. (Specialty

device approved by the Commissioner of The New York City Fire Department).

3. A. 4. <u>Duct smoke detector</u> is designed to sample air flow in the HVAC air duct and to detect presence of particles of combustion.

Duct smoke detector

Proper preventative measures shall be taken to protect all fire alarm initiating devices i.e. Smoke, heat and duct detectors especially during construction.

3. A.5. <u>Heat Detector</u>: A sensors that detects abnormally high temperature or rate of temperature rise. Heat detectors have been shown to be very effective in reducing fire damage. An illustration of a heat detectors is shown below:

Heat Detectors

Heat detectors are available in two general types: **rate-of-rise and fixed temperature.**

Heat detectors can only be tested by authorized fire alarm technicians. C of F holders are responsible for ensuring that operational heat detectors are in place. They must notify fire alarm maintenance companies to make all necessary repairs.

The rate-of-rise heat detectors activate the alarm when the room temperature increases at a rapid rate. This type of detector is more sensitive than the fixed temperature detector. The rate-of-rise heat detector does not have to be replaced after it has activated the fire alarm.
All heat detectors require special attention. They must be carefully installed according to the manufacturer's instructions.

Rate-of- rise heat detector

The fixed-temperature heat detectors activate the alarm when the detector components melt at a preset temperature level. The fixed-temperature heat detectors normally require replacement after they have sounded an alarm. However, intelligent heat detectors will usually reset themselves. For further information, contact your fire alarm service provider.

The fixed-temperature heat detectors are most commonly used. The detectors consist of two electrical contacts housed in a protective unit. The contacts are separated by a fusible element. The element melts when the temperature in the room reaches a preset level. This allows the contacts to touch. When the contacts meet the detector activates the fire alarm.

Fixed- temperature heat detectors

Where subject to mechanical damage a heat detector shall be protected by an approved UL/FM mechanical guard as shown in the picture below.

Heat detector with protective mechanical guard

4. <u>Manual or Pull Station Devices</u>:

A manually operated device used to initiate an alarm signal. Some fire alarm systems are activated automatically. When sensors detect heat or smoke and sound an alarm. Other fire alarm systems must be activated manually. A person who notices a fire emergency must activate the alarm by hand. Fire alarm systems that are manually activated use fire alarm pull stations. Fire alarm pull stations shall be located near the exits throughout the protected area so that they are conspicuous, unobstructed, and accessible. There must be at least one manual fire alarm station on each floor of a building. Manual fire alarm pull stations should be of contrasting color to the background on which they are mounted. Approved plastic covers are permitted to protect fire alarm manual pull stations and provide relief from false alarms.

There are two types of manual fire alarm pull stations. They are called **single action** and **double action** stations.

4. A. <u>Single action stations</u>: Single action stations require only one step to activate the alarm. For example, the alarm might be activated by pulling down on a lever. An example of a single action station is shown below. This kind of alarm station is often found indoors, e.g., in office buildings.

The cover on these alarm stations serves as a lever. When the cover is pulled down, it allows a switch inside to close. This sends the alarm signal.

Single action stations

4. B. <u>Double action stations</u>: Double action stations require two steps in order to activate the alarm. The user must first break a glass, open a door or lift a cover. The user can then gain access to a switch or lever which must then be operated to initiate an alarm. To activate this type of alarm station the cover must be lifted before the lever is pulled. This kind of double action station is often found indoors. Another kind of double action break glass station requires someone to break a small pane of glass with a small metal mallet.

Double action station

The Certificate of Fitness holder must know how to manually operate each alarm station on the premises. Once activated, the fire alarm system can not be re-set at the fire alarm manual pull station. The alarm must be re-set at a main FACP after the pull station reset to its normal condition. The alarm may be turned off only by a Certificate of Fitness holder or by a Fire Department representative. Once activated, a key may be required to reset the manual pull station.

All fire alarm pull stations installed or relocated after April 1, 1984 should be installed so that the handle is approximately four feet from the floor and it is located within (5 ft) of the exit doorway opening. Manual stations should never be blocked or obstructed.

5. Carbon Monoxide Detectors

Carbon monoxide detectors are required in any building that has fossil (gas and oil) fuel burning equipments.

Carbon monoxide detector

A carbon monoxide detector is a device indicating a concentration of carbon monoxide at or above the alarm threshold that could pose a risk to the life safety of the occupants and that requires immediate action. Carbon monoxide detectors shall be installed, tested, and maintained by qualified personnel in accordance with the manufacturers published instructions.

If a carbon monoxide detector is in alarm condition and cannot be reset, this could indicate that carbon monoxide is still in the premises. Until such time that carbon monoxide can be excluded as the source of the alarm, the assumption should be that carbon monoxide is present and appropriate life safety precautions should be followed.

6. Sprinkler Water Flow Detector

A sprinkler water flow detector is a device which initiates an alarm indicating a flow of water in a sprinkler system. It is designed to signal when water flows through the fire protection system.

The mechanical responsibility for the entire sprinkler system falls under the supervision of the sprinkler/standpipe C of F holder.

Water flow detector

7. Supervisory Devices:

Supervisory devices are commonly installed as part of some protection systems. The supervisory devices monitor important parts of the system. A supervisory alarm such as a bell will be sounded when there is an off normal condition with a system or device being monitored. For example, a signal will be sounded when a control valve closed or in the wrong position. This kind of signal is commonly called a supervisory signal. The signal is always transmitted to the main control panel. When a supervisory condition is indicated the Certificate of Fitness holder should check the system in order to identify the part of the system that caused the signal. Then that part of the system should be identified and dealt with accordingly. The supervisory signal may be transmitted to a FDNY approved central station company as well.

Some control panels indicate the exact location of the trouble. Other panels only display a general supervisory signal. For example, a lighted panel might indicate only that there is a problem somewhere in the fire protection system. Each supervised device must then be inspected to determine which part is causing the signal. Occasionally on some older systems the supervisory devices are wire to indicate a trouble condition if the Fire Alarm panel had no prevision of “Supervisory Alarm”.

Common supervised conditions include:

1. Control valves- i.e. sprinkler system tamper switches (supervised for off-normal conditions) Pressure valves-supervised for high and low pressure
2. Water tanks-supervised for high/low water and temperature
3. Electric fire pumps-supervised for pump running, pump failure, and phase reversal

Pressure Supervisory Switch
Supervisory Switch

Tank Water Level

Temperature Supervisory Switch

Tamper switch on a sprinkler valve

8. <u>Sub-System</u>

Sub-System is an activating (voluntary or required) system installed in a specific area or floor for a specific purpose in a building that has a required (mandated) base building fire alarm system.

All Sub-Systems including but not limited to the following; **Halon, Co2, FM200, Water Mist, Pre-Action, Range Hood, Carbon Dioxide, Foam system, Dry Chemical, Smoke Detection** or **Thermostatic Systems** shall be subject to Fire Department inspection and test for issuance of Letter of Approval for such Sub-System(s).

Thereafter, all such Sub-Systems shall be maintained in proper working order, and a person holding a C of F shall be in charge of the supervision and maintenance of all such activating system. A detailed record of such system as described in section 13 shall be kept available for examination by the Fire Department.

All Sub-Systems shall be interconnected to the base building fire alarm system for alarm and trouble supervision and shall annunciate specific type and location of such sub-system(s).

Activation of the sub-system shall activate the base building audible and visual appliances and notify the Fire Department via the base building Central Station.

9. Audio and Visual Notification Devices

A fire alarm system component such as a bell, horn, speaker, light or text display that provides audible, tactile or visible out puts or any combination thereof.

9. A. Horns, Horn/Strobes

Horns

Strobes

Horn Strobes

9. B. Combination speaker / strobe appliances

Speaker

Speaker strobe

9. C. Gongs Bells

Gongs Bells

10. <u>Activation of Audio /Visual Notification Devices</u>

There are second methods used to notify the occupants of a building in case of a fire.

The **first** method is the general alarm method. This method activates all audio/visual devices throughout the building when a fire is detected.

In certain locations, such as a day care center this may be the only feature available.

The **second** method is the selective method. The selective method activates the audio/visual devices only in the floor of alarm as well as the floor immediately above and the floor below.

After the fire alarm system for all methods has been activated it must be reset manually. When on premises the Certificate of Fitness holder shall investigate. The fire alarm system must be reset at the control panel. The fire alarm must remain in operating condition at all times.

11. <u>Communication System</u>

A functioning communication system is required as part of the fire alarm system when it is applicable. There are one and two-way communication system.

The Certificate of Fitness holder must make sure that all communication units are working correctly.

11. A. One way communication entails use of a public address system. Some buildings also have a public address system installed which is not part of the approved fire alarm system. Although not approved, the public address system may be used to warn and instruct building occupants in case of a fire

emergency. All communication systems may be used to issue evacuation instructions in building requiring two way communications.

11. B. The **two way** communication system uses warden phones. Warden phones must be placed at several locations in the building. The warden phones are usually located near exit stairways in the building. A warden phone must also be installed in the FACP. The FACP is used to issue instructions during a fire emergency. Portable two-way radios may also be used as a means of communication.

Two-way communication systems must be tested at least once every six months. If a telephone system is used a signal should sound at the command center as soon as the receiver is lifted from the cradle. It should be noted that in some systems voice communication are not required.

12. Central Station Transmitter

A central station transmitter is a device that receives alarm signals from protected premises and retransmits those signals to the Fire Department's Bureau of Fire Communication thru FDNY approved central station. Central Station transmitter must have primary and secondary telephone lines.

The C of F holder must make sure that the central station transmitter is operable at all times. When transmitter malfunctions are discovered, the C of F holder must report the malfunctions to the FDNY approved central station company and to be recorded into the log book. Authorized central station companies must be approved by FDNY. The central station company must arrange for any and all repairs as soon as possible.

C of F holders are **prohibited** from performing any repairs on the central station transmitter. They are also prohibited from installing or modifying any component of the fire alarm system.

13. Test, Inspection, and Repair Procedures for Fire Alarm Systems

A C of F (S-95) holder must supervise the operation and testing of the fire alarm system. A record of all tests, inspections, and other operations of the fire alarm system must be noted in the log book. Log books can be combined or separated depending upon your in house procedures

The entire fire alarm system must be visually inspected daily. A record of all tests, inspections, and other operations of the fire alarm system must be noted

in the log book. The Certificate of Fitness holder is responsible for this log. Defective equipment must be replaced immediately by authorized service technician.

The Certificate of Fitness holder must keep the log in a safe location inside the building for a minimum of 3 years. The log must be bound in hard cover. The log must be made readily available at all times on the premises to any representative of the Fire Department.

Entries must include:

- Inspection of Fire Alarm system and actions taken if defective equipment or abnormal conditions witnessed.
- Tests conducted by C of F holder (i.e. manual stations)
- Fire drill conducted
- Building with fire safety directors shall follow high rise bulleting guide lines.
- Further log book requirements may be specified in the Rules of City of New York.

Information to be found at the beginning of the log book:

- Premise address
- Fire alarm system FDNY approval date – type of system/manufacturer
- FDNY approved central station information:

    1. account number
    2. company name
    3. telephone number
    4. supervisors name

- Fire alarm maintenance contractor:
    1. company name
    2. telephone number
    3. supervisors name

Suggested format for log book entry

Date	Time	Name of C of F holder	C of F Number	Events/Test results	Disposition/Date (follow up)	Initials
1/06/09	1:00PM	Joe Doe	89924922	Conducted visual inspections fire alarm panel-system normal	System normal	JD
1/07/09	2:00PM	Jane Doe	89353423	tested exit "A" pull station found pull station to function satisfactorily	System normal	JD
1/23/09	1:00PM	Steve Doe	89887789	Visual inspections discovered defective horn/strobe on 6th floor and notified ABC Fire alarm Co. for service call.	ABC fire Alarm replaced the defective device 1/23/09	SD
1/27/09	1:00PM	Peter Pan	89345678	test exit "B" pull station on 5th Floor found to be defective & notified fire alarm co. for service (placed "**out of service**" sign over the pull station).	Repair made and sign removed. 1/28/09	PP

Any time a fire alarm system is to be activated during a test, inspection, or fire drill, ***it is mandatory to take the system "off line" by notifying the FDNY approved central station company monitoring the fire alarm beforehand to prevent the unnecessary dispatching of the Fire Department***. The telephone number for the FDNY approved central station should be readily available to the C of F holder. The telephone number for the FDNY approved central station and the account number associated with the fire alarm system are required to be located on the FACP and central station transmitter.

The FACP and fire alarm devices should be visually inspected for indicated abnormal conditions by the C of F holder at the beginning of each day. The purpose of the visual inspection is to detect defective components or abnormalities.

Manual (pull) stations -Each fire alarm system manual pull station should be tested a minimum of once monthly where practical. The results of the test shall be recorded in the log book. Defective devices must be replaced immediately by

qualified personnel. The manual stations may also be used to conduct fire drills.

Smoke detectors must be cleaned at least once every six months. This procedure makes sure that the detector is kept in good working condition. Smoke detectors must be cleaned by a person holding W-26 (Certificate of Fitness to maintenance smoke detector) only. The FDNY website provides a monthly list of approved Smoke Detector maintenance companies on the FDNY website @ www.nyc.gov/html/fdny/pdf/fire_prevention/instruct_smoke_detectors.pdf

The F-90 and/or S-95 C of F do not allow you to perform the smoke detector cleaning. The smoke detectors are extremely sensitive and easily damaged. They should never be painted or altered in any way. All testing shall be consistent with manufacturer specifications.

All maintenance and repairs of fire alarm systems and related components shall be performed by ***qualified personnel*** in the inspection, testing, and maintenance of fire alarm systems as per NYC Building and Fire Codes.

OUT OF SERVICE SITUATIONS & IMPAIRMENT COORDINATOR

Out of service system: A fire protection system that is not fully functional; or whose operation is impaired or is otherwise not in good working order.

System off-line entries:
The date and time the alarm system was taken off-line, the reason for such action, the name and operator number of the person notified at the FDNY approved central station (or other evidence of notification satisfactory to the Department), and the date and time the system was restored to service, shall be entered in the alarm log book in each such circumstance.

Out of service Signage:
The C of F holders notify supervisor and put a placard over the defective box indicating that device is out of service.

Impairment coordinator: The person responsible for ensuring that proper notification and safety precautions are taken when a fire protection system is out of service.

The owner/managing agent/tenant of the premises is required to designate an ***Impairment Coordinator*** for the building/entity. It will naturally be delegated to the C of F holder i.e. F-58, F-25, F-59 or S-95 and other related C of F

categories, when present. However when C of F holder is not onsite the related responsibilities must be transferred to some one specified by the building owner/managing agent/tenant. It is important for the Impairment Coordinator to take immediate steps to notify the FDNY.

The following steps must be taken immediately to call the FDNY depending upon the location of the building:

Manhattan	212-570-4300
Bronx	718-430-0200
Brooklyn	718-965-8300
Queens	718-476-6200
Staten Island	718-494-4296

The notification should include:

1. a brief description of condition.
2. area affected.
3. type of occupancy.
4. estimated time until it becomes operational.
5. name and Telephone number of Impairment Coordinator making the notification.

Any impairment to a fire Alarm or related system poses safety risks to a building and its occupants. The impairment coordinator shall be responsible to ensure appropriate posting of a fire guard detail, notifications to tenants, and posting out of service signage when appropriate.

14. Building Fire Protection Features Normally Activated By Fire Alarm Systems

HVAC Systems: The supply and movement of air is a primary determinant of the severity of a fire event in a building. When a fire is well supplied with fresh air and its component, oxygen, the fire will be able to grow and spread more rapidly. Similarly, when an air handling system is carrying superheated air or smoke through fire walls and between compartments, the spread of the fire will be greatly enhanced.

It is imperative that air movement be shut down in the event of a fire. Fire alarm systems are therefore interfaced to HVAC systems so that an alarm signal from the fire alarm system will cause the air handling systems in the area of the alarm to shut down.

When the fire alarm is reset, the fans usually will require resetting from a separate “Fan Restart” button or switch. The fan restart key switch, switch, or button is usually located at FACP.

Smoke Dampers: Smoke dampers open and close when required to provide fresh air or to stop smoke passage.

Fire Dampers: Fire dampers close when a rise in temperature occurs and stay shut to stop fire from passing through a barrier.

Elevator Recall: The fire alarm system integrates with elevator controls to recall elevator cars to designated landing floor in the event of an alarm.

Door Release (where connected to FACP): The fire alarm system will actuate a relay to release door holders so those doors will automatically close to provide smoke barrier between two areas.

The City of New York

FIRE DEPARTMENT

FIRE PREVENTION - FIRE ALARM INSPECTION UNIT - Electrical
9 MetroTech Center, 3rd Floor - Brooklyn, NY 11201-3857

ABC INC.
1111 W 111 St.
Brooklyn, NY 11201

CONTROL NUMBER: 156755
ACCOUNT NUMBER: 28206001
DATE OF APPROVAL: 01/15/09
DATE OF INSPECTION: 12/12/08
INSPECTOR NAME: K. SPEKTOR
BLDGS DEPT APPL. NO.: 310156755
PLAN NUMBER:
FLOOR(S) INSPECTED: 001

FIRE DEPARTMENT CITY OF NEW YORK

PREMISES:	BOROUGH:
1111 W 111 ST	Brooklyn

LETTER OF APPROVAL

THIS LETTER OF APPROVAL COVERS THE SYSTEMS INDICATED BELOW. IT IS SUBJECT TO ADMINISTRATIVE REVIEW AND AUDIT.

APPROVAL OF THE SYSTEM(S) IS GRANTED IN ACCORDANCE WITH:

X
☐ **SELF CERTIFICATION** ☐ **INSPECTION**
INTERIOR FIRE ALARM,SPRINKLER ALARM,SMOKE DETECT & CENTRAL OFFICE
****
****
****
****
****

Sincerely,

Chief of Fire Prevention
City of New York

By Manager
~~Fire Alarm Inspection~~ Unit

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