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## Smoke and Fire Alarm

### User's Guide

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A.C. Wire-in Single and/or Multiple Station (24 Devices) Ionization Smoke Alarm

Thank you for purchasing this smoke and fire alarm. It is an important part of your family's home safety plan. You can trust this product to provide the highest quality safety protection. We know you expect nothing less when the lives of your family are at stake.

***For your convenience, write down the following information.  
If you call our Consumer Hotline, these are the first questions  
you will be asked.***

*Smoke Alarm Model Number (located on back of alarm):*

*Date Code (located on back of alarm). The National Fire Protection Association and the manufacturer recommend replacing this alarm ten years from the date code:*

*Date of Purchase:*

*Where Purchased:*



This product is designed to detect products of combustion using the ionization technique. It contains 0.9 microcurie of Americium 241, a radioactive material. Distributed under U.S. NRC License No. 32-23858-01E. Manufactured in compliance with U.S. NRC safety criteria in 10 CFR 32.27. The purchaser is exempt from any regulatory requirements.

**WARNING! DISCONNECTING OR LOSS OF A.C. POWER WILL RENDER THE SMOKE ALARM INOPERATIVE.**

ELECTRICAL RATING: 120 VAC, 60HZ, 80mA maximum per alarm (maximum 80mA for originating unit with 24 devices interconnected).

**IMPORTANT! READ ALL INSTRUCTIONS BEFORE INSTALLATION AND KEEP THIS MANUAL NEAR THE ALARM FOR FUTURE REFERENCE.**

**CONTENTS OF THIS MANUAL**

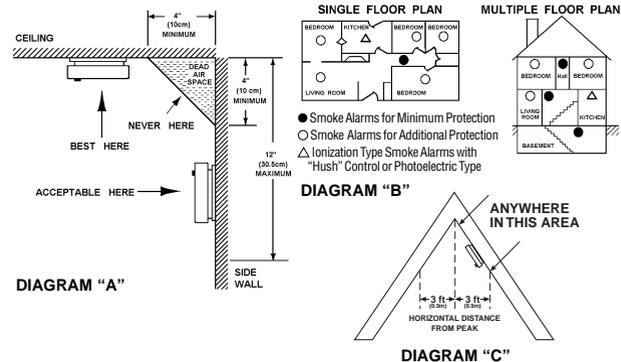
- 1 -- RECOMMENDED LOCATIONS FOR SMOKE ALARMS
- 2 -- LOCATIONS TO AVOID
- 3 -- INSTALLATION INSTRUCTIONS
- 4 -- OPERATION AND TESTING
- 5 -- NUISANCE ALARMS
- 6 -- MAINTENANCE
- 7 -- LIMITATIONS OF SMOKE ALARMS
- 8 -- GOOD SAFETY HABITS
- 9 -- NRC INFORMATION
- 10 -- NFPA PROTECTION STANDARD 72
- 11 -- CALIFORNIA STATE FIRE MARSHAL REQUIRED INFORMATION
- 12 -- SERVICE AND WARRANTY

This smoke alarm uses an extremely small amount of radioactive element in the ionization chamber (see Section 9). Do not try to repair the smoke alarm yourself. Refer to the instructions in Section 12 for service.

**1. RECOMMENDED LOCATIONS FOR ALARMS**

- Locate the first alarm in the immediate area of the bedrooms. Try to protect the exit path as the bedrooms are usually farthest from the exit. If more than one sleeping area exists, locate additional alarms in each sleeping area.
- Locate additional alarms to protect any stairway as stairways act like chimneys for smoke and heat.
- Locate at least one alarm on every floor level.
- Locate an alarm in every bedroom.
- Locate an alarm in every room where electrical appliances are operated (i.e., portable heaters or humidifiers).
- Locate an alarm in every room where someone sleeps with the door closed. The closed door may prevent the alarm from waking the sleeper.
- Smoke, heat, and combustion products rise to the ceiling and spread horizontally. Mounting the smoke alarm on the ceiling in the center of the room places it closest to all points in the room. Ceiling mounting is preferred in ordinary residential construction.

- For mobile home installation, select locations carefully to avoid thermal barriers that may form at the ceiling. For more details, see MOBILE HOME INSTALLATION below.
- When mounting an alarm on the ceiling, locate it at a minimum of 4" (10 cm) from the side wall (see Diagram A).
- When mounting the alarm on the wall, use an inside wall with the top edge of the alarm at a minimum of 4" (10 cm) and a maximum of 12" (30.5 cm) below the ceiling (see Diagram A).
- Put smoke alarms at both ends of a bedroom hallway or large room if the hallway or room is more than 30 feet (9.1 m) long.
- Install Smoke Alarms on sloped, peaked or cathedral ceilings at or within 3 ft. (0.9m) of the highest point (measured horizontally). NFPA states: "Smoke alarms in rooms with ceiling slopes greater than 1 foot in 8 feet (.3 m in 2.4 m) horizontally shall be located on the high side of the room" "A row of detectors shall be spaced and located within 3 ft. (0.9 m) of the peak of the ceiling measured horizontally" (see diagram "C").



**MOBILE HOME INSTALLATION**

Mobile homes built in the past five to seven years have been designed to be energy efficient. Install smoke alarms as recommended above (refer to RECOMMENDED LOCATIONS and Diagram A).

In mobile homes that are not well insulated compared to present standards, extreme heat or cold can be transferred from the outside to the inside through poorly insulated walls and roof. This may create a thermal barrier which can prevent the smoke from reaching an alarm mounted on the ceiling. In such units, install the smoke alarm on an inside wall with the top edge of the alarm at a minimum of 4" (10 cm) and a maximum of 12" (30.5 cm) below the ceiling (see Diagram A).

If you are not sure about the insulation in your mobile home, or if you notice that the outer walls and ceiling are either hot or cold, install the alarm on an inside wall. For minimum protection, install at least one alarm close to the bedrooms. For additional protection, see SINGLE FLOOR PLAN in Diagram B.

**WARNING: TEST YOUR SMOKE ALARM OPERATION AFTER R.V. OR MOBILE HOME VEHICLE HAS BEEN IN STORAGE, BEFORE EACH TRIP AND AT LEAST ONCE A WEEK DURING USE.**

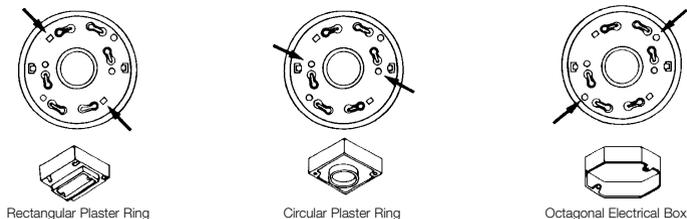


8. Turn on the A.C. power. The green A.C. Power On Indicator should be lit when the alarm is operating from A.C. power.

**TAMPER RESIST LOCKING PIN:** To make your smoke alarm somewhat tamper resistant, a locking pin has been provided with your alarm. Using this pin will deter children and others from removing the alarm from trim ring. To use the pin, insert it into the hole in the side of the alarm after the alarm has been installed on the trim ring (see Figure 5). NOTE: The tamper resist pin will have to be removed in order to remove the alarm. Use a long nose pliers to pull the pin out of the hole. It is now possible to remove the alarm from the trim ring.

After installation, TEST your alarm by pressing and holding the test button for several seconds. This should sound the alarm.

## FIGURE 2. SELECT CORRECT MOUNTING HOLES ON TRIM RING



## 4. OPERATION AND TESTING

**OPERATION:** The smoke alarm is operating once A.C. power is applied and testing is complete. When the smoke alarm ionization chamber senses products of combustion, the horn will sound a loud (85db) temporal alarm until the sensing chamber is cleared of smoke particles.

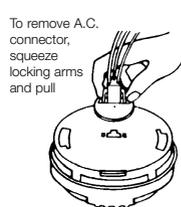


FIGURE 3.

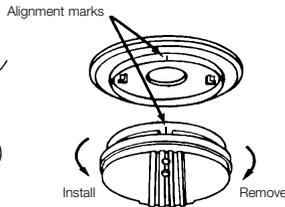


FIGURE 4.



FIGURE 5.

**LED INDICATORS:** This smoke alarm is equipped with red and green LED indicators. The red LED is located under the test button and has two modes of operation.

### Standby Condition

The red LED will flash every 30-40 seconds to indicate that the smoke alarm is operating properly.

### Alarm Condition

When the alarm senses products of combustion and goes into alarm, the red LED will flash rapidly (one flash per second). The rapid flashing LED and temporal alarm will continue until the air is cleared.

WHEN UNITS ARE INTERCONNECTED, only the red LED of the alarm which senses the smoke or is being tested (the originating unit) will flash rapidly. All other units in the interconnect system will sound an alarm but their red LED's will NOT flash rapidly.

The green LED has two modes of operation.

### Standby Condition Alarm Condition

The green LED will be steady on, indicating the presence of AC power. This smoke alarm is equipped with an alarm memory which provides a visual indication when an alarm has been activated. A flashing green LED indicates the memory condition. The memory will remain activated until it is reset by pushing the test button.

In an interconnected installation only the memory of the originating alarm will be activated.

**TESTING:** Test by pushing the test button on the cover and hold it down for a minimum of 2 seconds. This will sound the alarm if the electronic circuitry and horn are working. If no alarm sounds, check the fuse or circuit breaker supplying power to the alarm circuit. If the alarm still does not sound, the unit may have other failure. DO NOT use an open flame to test your alarm, you could damage the alarm or ignite combustible materials and start a structure fire.

**TEST THE ALARM WEEKLY TO ENSURE PROPER OPERATION.** Erratic or low sound coming from your alarm may indicate a defective alarm, and it should be returned for service (see Section 12).

## 5. NUISANCE ALARMS

Smoke alarms are designed to minimize nuisance alarms. Cigarette smoke will not normally set off the alarm, unless the smoke is blown directly into the alarm. Combustion particles from cooking may set off the alarm if the alarm is located close to the cooking area. Large quantities of combustible particles are generated from spills or when broiling. Using the fan on a range hood which vents to the outside (non-recirculating type) will also help remove these combustible products from the kitchen.

If the alarm does sound, check for fires first. If a fire is discovered, get out and call the fire department. If no fire is present, check to see if one of the reasons listed in Section 2 may have caused the alarm.

## 6. MAINTENANCE

### ALARM REMOVAL

**IF TAMPER RESIST PIN HAS BEEN USED, REFER TO TAMPER RESIST LOCKING PIN IN SECTION 3 FOR PIN REMOVAL INSTRUCTIONS.**

You can remove the alarm from the trim ring by rotating the alarm in the direction of the "OFF" arrow on the cover (See Section 3, Figure 4).

To disconnect the A.C. power harness, squeeze the locking arms on the sides of the Quick Connector while pulling the connector away from the bottom of the alarm (see Section 3, Figure 3).

### CLEANING YOUR ALARM.

**YOUR ALARM SHOULD BE CLEANED AT LEAST ONCE A YEAR.**

To clean your alarm, remove it from the mounting bracket as outlined in the beginning of this section. You can clean the interior of your alarm (sensing chamber) by using compressed air or a vacuum cleaner hose and blowing or vacuuming through the openings around the perimeter of the alarm. The outside of the alarm can be wiped with a damp cloth.

After cleaning, reinstall your alarm and test your alarm by using the test button. Check that the green LED is on. If cleaning does not restore the alarm to normal operation the alarm should be replaced.

## 7. LIMITATIONS OF SMOKE ALARMS

### WARNING: PLEASE READ CAREFULLY AND THOROUGHLY

- NFPA 72 states: Life safety from fire in residential occupancies is based primarily on early notification to occupants of the need to escape followed by the appropriate egress actions by those occupants. Fire warning systems for dwelling units are capable of protecting about half of the occupants in potentially fatal fires. Victims are often intimate with the fire, too old or young, or physically or mentally impaired such that they cannot escape even when warned early enough that escape should be possible. For these people, other strategies such as protection-in-place or assisted escape or rescue are necessary.
- Smoke alarms are devices that can provide early warning of possible fires at a reasonable cost; however, alarms have sensing limitations. Ionization type alarms offer a broad range of fire sensing capabilities but are better at detecting fast flaming fires than slow smoldering fires. Photoelectric alarms sense smoldering fires better than flaming fires. Home fires develop in different ways and are often unpredictable. **Neither type of alarm (photoelectric or ionization) is always best, and a given alarm may not always provide warning of a fire.**
- A battery powered alarm must have a battery of the specified type, in good condition and installed properly.
- A.C. powered alarms will not operate if the A.C. power has been cut off, such as by an electrical fire or an open fuse.
- Smoke alarms must be tested regularly to make sure the batteries and the alarm circuits are in good operating condition.
- Smoke alarms cannot provide an alarm if smoke does not reach the alarm. Therefore, smoke alarms may not sense fires starting in chimneys, wall, on roofs, on the other side of a closed door or on a different floor.
- If the alarm is located outside the bedroom or on a different floor, it may not wake up a sound sleeper.
- The use of alcohol or drugs may also impair one's ability to hear the smoke alarm. For maximum protection, a smoke alarm should be installed in each sleeping area on every level of a home.
- Although smoke alarms can help save lives by providing an early warning of a fire, they are not a substitute for an insurance policy. Home owners and renters should have adequate insurance to protect their lives and property.
- Install and maintain Fire Extinguishers on every level of the home and in the kitchen, basement and garage. Know how to use a fire extinguisher prior to an emergency.

## 8. GOOD SAFETY HABITS

### DEVELOP AND PRACTICE A PLAN OF ESCAPE

- Make a floor plan indicating all doors and windows and at least two (2) escape routes from each room. Second story windows may need a rope or chain ladder.
- Have a family meeting and discuss your escape plan, showing everyone what to do in case of fire.
- Determine a place outside your home where you all can meet if a fire occurs.
- Familiarize everyone with the sound of the smoke alarm and train them to leave your home when they hear it.
- Practice a fire drill at least every six months. Practice allows you to test your plan before an emergency. You may not be able to reach your children. It is important they know what to do.

### WHAT TO DO WHEN THE ALARM SOUNDS

- Leave immediately by your escape plan. Every second counts, so don't waste time getting dressed or picking up valuables.
- In leaving, don't open any inside door without first feeling its surface. If hot, or if you see smoke seeping through cracks, don't open that door! Instead, use your alternate exit. If the inside of the door is cool, place your shoulder against it, open it slightly and be ready to slam it shut if heat and smoke rush in.
- Stay close to the floor if the air is smoky. Breathe shallowly through a cloth, wet if possible.
- Once outside, go to your selected meeting place and make sure everyone is there.
- Call the fire department from your neighbor's home - not from yours!
- Don't return to your home until the fire officials say that it is all right to do so.

There are situations where a smoke alarm may not be effective to protect against fire as stated in the NFPA Standard 72. For instance:

- a) smoking in bed
- b) leaving children home alone
- c) cleaning with flammable liquids, such as gasoline

**Further information on fire safety can be obtained in a pamphlet titled "IN A FIRE SECONDS COUNT" published by the NFPA, Batterymarch Park, Quincy, MA 02269**

## 9. NRC INFORMATION

Ionization type smoke alarms use a very small amount of a radioactive element in the sensing chamber to enable detection of visible and invisible combustion products. The radioactive element is safely contained in the chamber and requires no adjustments or maintenance. This smoke alarm meets or exceeds all government standards. It is manufactured and distributed under license from the U.S. Nuclear Regulatory Commission.

## 10. NFPA REQUIRED PROTECTION

The National Fire Protection Association's Standard 72 provides the following information:

Smoke alarms shall be installed outside each separate sleeping area in the immediate vicinity of the bedrooms and on each additional story of the family living unit, including basements and excluding crawl spaces and unfinished attics. In new construction, a smoke alarm also shall be installed in each sleeping room.

Smoke Detection - Are More Smoke Alarms Desirable? The required number of smoke alarms might not provide reliable early warning protection for those areas separated by a door from the areas protected by the required smoke alarms. For this reason, it is recommended that the householder consider the use of additional smoke alarms for those areas for increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required smoke alarms. The installation of the smoke alarms in the kitchen, attic (finished or unfinished), or garage is normally not recommended, as these locations occasionally experience conditions that can result in improper operation.

This equipment should be installed in accordance with the National Fire Protection Association's Standard 72 (NFPA, Batterymarch Park, Quincy, MA 02269).

NOTIFY YOUR LOCAL FIRE DEPARTMENT AND INSURANCE COMPANY OF YOUR SMOKE ALARM INSTALLATION.

## 11. CAUTION (AS REQUIRED BY THE CALIFORNIA STATE FIRE MARSHAL)

"Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows: A smoke alarm installed in each separate sleeping area (in the vicinity of, but outside of the bedrooms), and heat or smoke alarms in the living rooms, dining rooms, bedrooms, kitchens, hallways, attics, furnace rooms, closets, utility and storage rooms, basements and attached garages."

## 12. SERVICE AND WARRANTY

If after reviewing this manual you feel that your smoke alarm is defective in any way, do not tamper with the unit. Return it for servicing to: KIDDE Safety, 1394 South Third St., Mebane, NC 27302. (See Warranty for in-warranty returns)

### FIVE YEAR LIMITED WARRANTY

KIDDE Safety warrants to the original purchaser that the enclosed smoke alarm will be free from defects in material and workmanship or design under normal use and service for a period of five years from the date of purchase. The obligation of KIDDE Safety under this warranty is limited to repairing or replacing the smoke alarm or any part which we find to be defective in material, workmanship or design, free of charge to the customer, upon sending the smoke alarm with proof of date of purchase, postage and return postage prepaid, to Warranty Service Department, KIDDE Safety, 1394 South Third St., Mebane, NC 27302.

This warranty shall not apply to the smoke alarm if it has been damaged, modified, abused or altered after the date of purchase or if it fails to operate due to improper maintenance or inadequate A.C. or D.C. electrical power.

THE LIABILITY OF KIDDE SAFETY OR ANY OF ITS PARENT OR SUBSIDIARY CORPORATIONS ARISING FROM THE SALE OF THIS SMOKE ALARM OR UNDER THE TERMS OF THIS LIMITED WARRANTY SHALL NOT IN ANY CASE EXCEED THE COST OF REPLACEMENT OF SMOKE ALARM AND, IN NO CASE, SHALL KIDDE SAFETY OR ANY OF ITS PARENT OR SUBSIDIARY CORPORATIONS BE LIABLE FOR CONSEQUENTIAL LOSS OR DAMAGES RESULTING FROM THE FAILURE OF THE SMOKE ALARM OR FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE COMPANY'S NEGLIGENCE OR FAULT.

Since some states do not allow limitations on the duration of an implied warranty or do not allow the exclusion or limitation of incidental or consequential damages, the above limitations or exclusions may not apply to you. While this warranty gives you specific legal rights, you may also have other rights which vary from state to state.

The above warranty may not be altered except in writing signed by both parties hereto.

### QUESTIONS OR FOR MORE INFORMATION

Call our Consumer Hotline at  
**1-800-880-6788**

or contact us at our website at

**www.KIDDE.com**



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