

## Smoke Alarm User's Guide

9 Volt Battery Operated Photo Electric/ Ionization Smoke Alarm with "HUSH" Control to temporarily silence nuisance alarms, and alarm memory.

Thank you for purchasing this smoke alarm. It is an important part of your family's home safety plan. You can trust KIDDE Safety to provide the highest quality safety products. 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 Customer 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 (NFPA) and the manufacturer recommend replacing this alarm ten years from the date code:*

*Date of Purchase:*

*Where Purchased:*



The Ion portion of this alarm detects 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! REMOVAL OF THE SMOKE ALARM BATTERY WILL RENDER THE SMOKE ALARM INOPERATIVE.**

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

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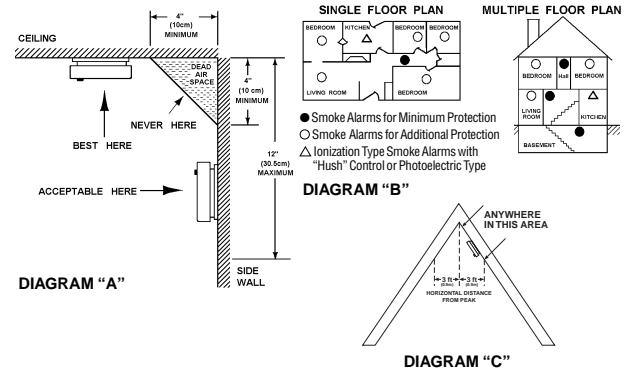
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The Ion portion of this smoke alarm uses an extremely small amount of radioactive element in the ionization chamber (see Section 9). Do not try to repair the smoke alarm yourself. Refer to the instructions in Section 12 for service.

**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 3ft (0.9m) of the highest point (measured horizontally). NFPA states: "Smoke alarms in rooms with ceiling slopes greater than 1 foot in 8 feet (.3m in 2.4m) horizontally shall be located on the high side of the room." NFPA states: "A row of alarms shall be spaced and located within 3 ft (0.9m) of the peak of the ceiling measured horizontally" (see diagram "C").



**MOBILE HOME INSTALLATION**

Mobile homes built in the past 10 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.

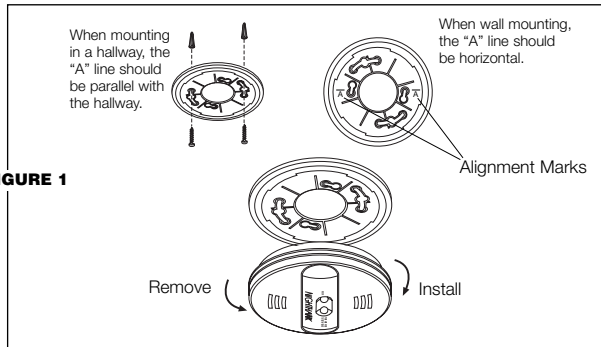
**WARNING: TEST YOUR SMOKE ALARM OPERATION AFTER R.V. OR MOBILE HOME VEHICLE HAS BEEN IN STORAGE, BEFORE EACH TRIP AND AT LEAST ONCE A WEEK DURING USE.**

## 2. LOCATIONS TO AVOID

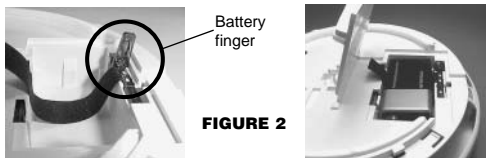
- In the garage. Products of combustion are present when you start your automobile.
- Less than 4" (10cm) from the peak of an "A" frame type ceiling.
- In an area where the temperature may fall below 40°F or rise above 100°F.
- In dusty areas. Dust particles may cause nuisance alarms or failure to alarm.
- In very humid areas. Moisture or steam can cause nuisance alarms.
- In insect infested areas.
- Smoke alarms should not be installed within 3 ft. (.9m) of the following: the door to a kitchen, the door to a bathroom containing a tub or shower, forced air ducts used for heating or cooling, ceiling or whole house ventilating fans, or other high air flow areas.
- Kitchens. Normal cooking may cause nuisance alarms. If a kitchen alarm is desired, it should have an alarm silence feature or be a photoelectric type.
- Near fluorescent lights. Electronic "noise" may cause nuisance alarms.

## 3. INSTALLATION INSTRUCTIONS

**CAUTION: THIS UNIT IS SEALED. THE COVER IS NOT REMOVABLE!**



**FIGURE 1**



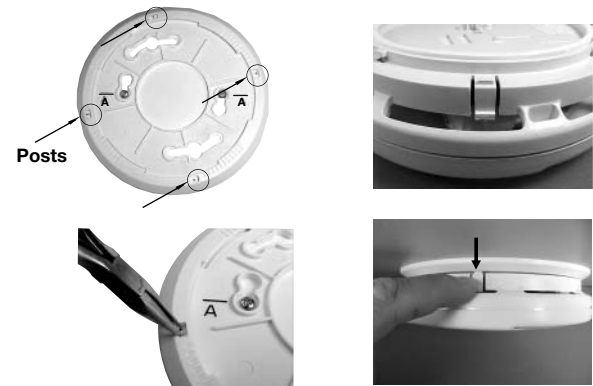
**FIGURE 2**

1. Remove the mounting plate from the back of the alarm by holding the mounting plate and twisting the alarm in the direction indicated by the "OFF" arrow on the alarm cover. (See Figure 1)
2. To ensure aesthetic alignment of the alarm with the hallway or wall, the "A" line on the mounting plate must be parallel with the hallway when ceiling mounting or horizontal when wall mounting. (See Figure 1)
3. After selecting the proper smoke alarm location as described in Section 1, attach the mounting plate to the ceiling as shown in Figure 1. For wall mounting, place mounting plate on the wall. Use the screws and anchors provided to secure the mounting plate (use 3/16" drill bit for anchor holes).
4. Battery installation instructions are provided on the inside of the battery door. To ensure proper installation of the smoke alarm battery, follow the instructions.
5. When installing the battery, press the battery reminder finger down into the battery compartment and install the battery (see Figure 2).

**CAUTION: IF THE BATTERY REMINDER FINGER IS NOT HELD DOWN IN THE BATTERY COMPARTMENT BY THE BATTERY, THE BATTERY DOOR WILL NOT CLOSE AND THE UNIT WILL NOT ATTACH TO THE MOUNTING BRACKET.**

**TAMPER RESIST FEATURE:** To make your smoke alarm somewhat tamper resistant, a tamper resist feature has been provided. Activate the tamper resist feature by breaking off the four posts in the square holes in the trim ring (see Figure 3). When the posts are broken off, the tamper resist tab on the base is allowed to engage the mounting bracket. Rotate the alarm onto the trim ring until you hear the tamper resist tab snap into place, locking the alarm on the trim ring. Using the tamper resist feature will deter children and others from removing the alarm from trim ring. NOTE: To remove the alarm when the tamper resist tab is engaged, press down on the tamper resist tab, and rotate the alarm off of the trim ring (see Figure 3).

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



**FIGURE 3**

## 4. OPERATION AND TESTING

**OPERATION:** The smoke alarm is operating once a fresh battery is installed and testing is complete. When products of combustion are sensed, the unit sounds a loud (85db) temporal alarm until the air is cleared.

**HUSH CONTROL:** The "HUSH" feature has the capability of temporarily desensitizing the alarm circuit for approximately 10 minutes. This feature is to be used only when a known alarm condition, such as smoke from cooking activates the alarm. The smoke alarm is desensitized by pushing the "HUSH" button on the smoke alarm cover. If the smoke is not too dense, the alarm will silence immediately and the red LED will flash every 2 seconds for approximately 10 minutes. This indicates that the alarm is in a temporarily desensitized condition. The smoke alarm will automatically reset after approximately 10 minutes, and sound the alarm if smoke is still present. The "HUSH" feature can be used repeatedly until the air has been cleared of the condition causing the alarm. Pushing the test/reset button on the alarm will end the hush period.

**NOTE: DENSE SMOKE WILL OVERRIDE THE HUSH CONTROL FEATURE AND SOUND A CONTINUOUS ALARM.**

**CAUTION: BEFORE USING THE ALARM HUSH FEATURE, IDENTIFY THE SOURCE OF THE SMOKE AND BE CERTAIN A SAFE CONDITION EXISTS.**

**LED INDICATOR:** This smoke alarm is equipped with a red LED indicator. The red LED is located under the test button and has several modes of operation.

<b>Standby Condition</b>	The red LED will flash every 30-40 seconds to indicate that the smoke alarm is operating properly.
<b>Alarm Condition</b>	When the alarm senses products of combustion and goes into alarm, the red LED will flash rapidly (one every two seconds). The rapid flashing LED and temporal alarm will continue until the air is cleared.
<b>Hush Condition</b>	The red LED will flash every 2 seconds as long as the alarm is in Hush mode.
<b>Low Battery Condition</b>	The red LED flash will be accompanied by an audible chirp. Replace the battery when this condition occurs.

**SMOKE SENSING CHAMBER OPERATION:** This alarm will "chirp" if any of the components in the smoke sensing chamber fail. This chirp will occur between the flashes of the red LED indicator light. (If the chirp occurs at the same time as the red LED flash, see Section 6 for low battery information.)  
**TESTING:** Test by pushing the test button on the cover and hold it down for a minimum of 5 seconds. This will sound the alarm if the electronic circuitry and horn and battery are working. If no alarm sounds, the unit has defective batteries or 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.

**Alarm Memory** This smoke alarm is equipped with an alarm memory feature which produces a rapid chirping sound when the test button is pushed. This sound indicates that the alarm has been activated since it was last tested. Releasing the test button clears the memory. If the alarm memory sound is heard, release the test button and press the test button again to enter the normal test mode.

**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.

The model PI 9000 has a "HUSH" control that is extremely useful in a kitchen area or other areas prone to nuisance alarms. For more information refer to Section 4, OPERATION AND TESTING.

## 6. MAINTENANCE ALARM REMOVAL

**IF TAMPER RESIST FEATURE HAS BEEN ACTIVATED, REFER TO TAMPER RESIST FEATURE DESCRIPTION IN SECTION 3 FOR REMOVAL INSTRUCTIONS.**

To replace the battery, remove the alarm from the trim ring by rotating the alarm in the direction of the "OFF" arrow on the cover.

## BATTERY INSTALLATION AND REMOVAL

To replace or install the batteries you must first remove the alarm from the trim ring by following the ALARM REMOVAL instructions at the beginning of this section. After alarm has been removed, you can open the battery door and install or replace the battery. Battery installation instructions are provided on the inside of the battery door.

When installing the battery, press the battery reminder finger down into the battery compartment and install the battery (see Section 3, Figure 3).

**CAUTION! IF THE BATTERY REMINDER FINGER IS NOT HELD DOWN IN THE BATTERY COMPARTMENT BY THE BATTERY, THE BATTERY DOOR WILL NOT CLOSE AND THE ALARM WILL NOT ATTACH TO THE TRIM RING.**

This smoke alarm uses a 9V alkaline battery (a lithium battery may also be used). A fresh alkaline battery should last for one year under normal operating conditions.

This alarm has a low battery monitor circuit which will cause the alarm to "chirp" approximately every 30 - 40 seconds for a minimum of seven (7) days when the battery gets low. Replace the battery when this condition occurs.

**USE ONLY THE FOLLOWING 9 VOLT BATTERIES FOR SMOKE ALARM REPLACEMENT.**

Alkaline type	EVEREADY 522; DURACELL MX 1604, MN1604; GOLD PEAK 1604A
Lithium type	ULTRALIFE U9VL

After installing or changing the battery, reinstall your alarm. Test your alarm by using the test button.

**NOTE: REGULAR TESTING IS RECOMMENDED.**

**WARNING! USE ONLY THE BATTERIES SPECIFIED. USE OF DIFFERENT BATTERIES MAY HAVE A DETRIMENTAL EFFECT ON THE SMOKE ALARM.**

## **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 your alarm by using compressed air or a vacuum cleaner hose to blow or suck air through the openings around the perimeter of the alarm. The outside of the alarm can be wiped with a damp cloth. If cleaning does not restore the alarm to normal operation the alarm should be replaced. After cleaning, reinstall your alarm. Test your alarm by using the test button.

## **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, walls, 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.

## **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.
- 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.

## **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**

The ionization portion of this smoke alarm uses 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 detectors 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. 800-880-6788 (See Warranty for in-warranty returns)

### FIVE YEAR LIMITED WARRANTY

KIDDE Safety warrants to the original purchaser that the enclosed smoke alarm (but not the battery) 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.

Also, KIDDE Safety makes no warranty, express or implied, written or oral, including that of merchantability or fitness for any particular purpose, with respect to the battery.

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**

**KIDDE**

1394 South Third Street

Mebane, NC 27302