

# Smoke Alarm

## User's Guide

**i9010CA**



**i9010CA**

10 Year Sealed Lithium Battery Operated

**ATTENTION:** Please take a few minutes to thoroughly read this user's guide, which should be saved for future reference and passed on to any subsequent owner.

# Contents

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Made in China. Patents Pending

## Introduction

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Thank you for purchasing this smoke 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.

Please take a few minutes to thoroughly read this alarm manual, and save it for future reference. Teach children how to respond to the alarms, and that they should never play with the unit.

If you have any questions about the operation or installation of your alarm, please call our toll free Consumer Hotline at 1-800-880-6788.

Image 1C will help you determine the correct location of safety products that will help make your home a safer place.

**IMPORTANT: Read all instructions before installation and keep this manual near the alarm for future reference.**

**Do not try to repair the smoke alarm yourself. Refer to the instructions in Warranty section for service.**

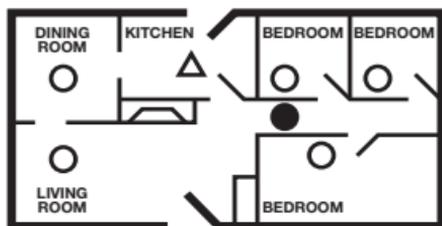
# Installation

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## Recommended Locations

- 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 (Image 1A).
- 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 (Image 1B).
- 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.
- When mounting an alarm on the ceiling, locate it at a minimum of 10 cm (4") from the side wall (Image 2A).
- When mounting the alarm on the wall, use an inside wall with the top edge of the alarm at a minimum of 10 cm (4") and a maximum of 30.5 cm (12") below the ceiling (Image 2A).
- Put smoke alarms at both ends of a bedroom hallway or large room if the hallway or room is more than 9.1 m (30') long.
- For mobile home installation, select locations carefully to avoid thermal barriers that may form at the ceiling. For more details, see **Mobile Homes**.

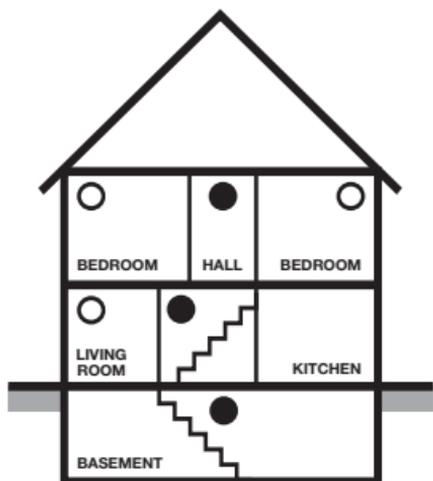
# Installation



- Smoke Alarms for Minimum Protection
- Smoke Alarms for Additional Protection
- △ Ionization Type Smoke Alarm with Hush® Control or Photoelectric Type

**SINGLE FLOOR PLAN**

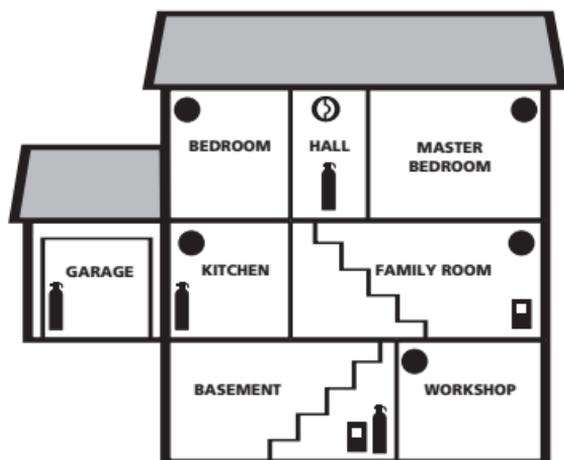
**IMAGE 1A**



**MULTIPLE FLOOR PLAN**

**IMAGE 1B**

- Install smoke alarms on sloped, peaked or cathedral ceilings at or within 0.9 m (3') of the highest point (measured horizontally). NFPA Standard 72 states: "Smoke alarms in rooms with ceiling slopes greater than 0.3 m in 2.4 m (1 foot in 8 feet) horizontally shall be located on the high side of the room." NFPA Standard 72 states: "A row of detectors shall be spaced and located within 0.9 m (3') of the peak of the ceiling measured horizontally" (Image 2B).



-  FIRE EXTINGUISHERS
-  SMOKE ALARMS
-  CARBON MONOXIDE ALARMS
-  TALKING SMOKE/CO ALARM

**IMAGE 1C**

**TOTAL HOME PROTECTION**

# Installation

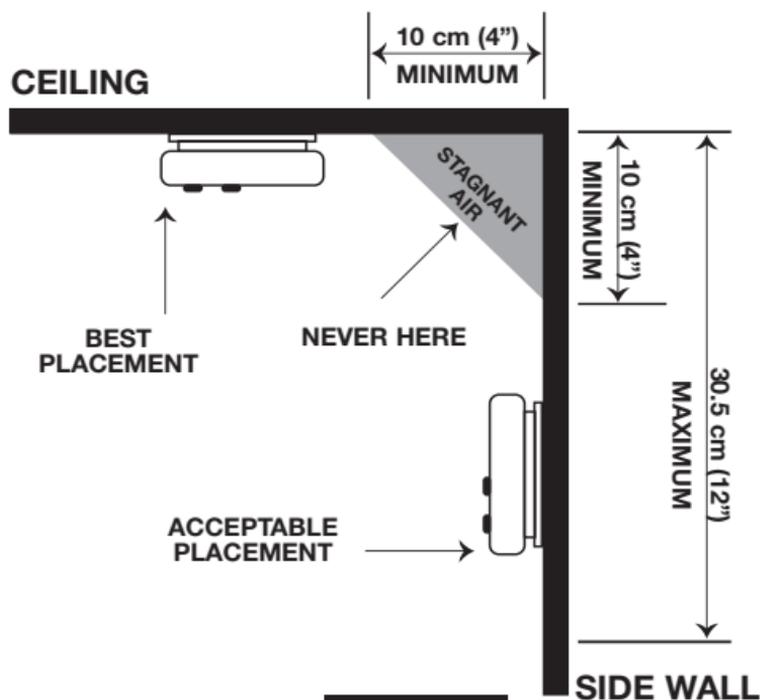
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## Locations to Avoid

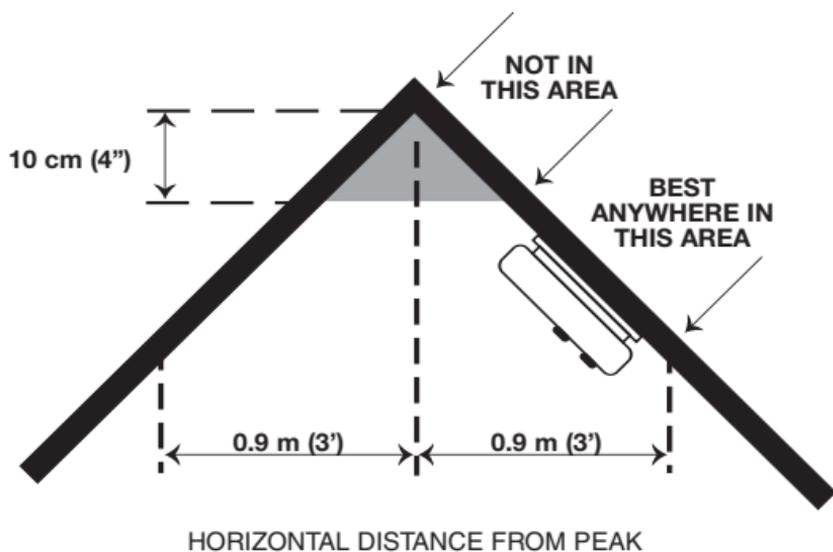
- Do not install within 0.9 m (3') of the following: The door to a kitchen, or a bathroom that contains a tub or shower, forced air ducts used for heating or cooling, ceiling or whole house ventilating fans, or other high air-flow areas.
- Do not place the alarm where drapes or other objects will block the sensor. Smoke must be able to reach the sensor to accurately detect conditions.
- Do not install in peaks of vaulted ceilings, "A" frame ceilings or gabled roofs. (Less than 10 cm (4") from the peak of an "A" frame type ceiling.)
- Install at least 30.5 cm (12") away from fluorescent lights as electronic noise may cause nuisance alarms.
- Keep out of insect infested areas. Avoid excessively dusty, dirty or greasy areas. Dust particles may cause nuisance alarms or failure to alarm.
- Extreme temperatures may effect the sensitivity of the alarm. Do not install in areas where the temperature is colder than 4.4°C (40°F) or hotter than 37.8°C (100°F), such as garages and unfinished attics.
- Do not install in areas where the relative humidity (RH) is greater than 85%. Very humid areas, with moisture or steam, can cause nuisance alarms.
- Avoid placing ionization smoke alarms in kitchen areas. Normal cooking may cause nuisance alarms. If a kitchen alarm is desired, it should have an alarm silence feature or be a photoelectric type.
- Do not place in the garage. Particles of combustion are present when you start your automobile.
- Smoke alarms are not to be used with detector guards unless the combination (alarm and guard) has been evaluated and found suitable for that purpose.

# Installation

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**IMAGE 2A**



**IMAGE 2B**

# Installation

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## Mounting

**CAUTION: This unit is sealed (including the battery). The cover is not removable!**

- After selecting the proper smoke alarm location as described previously, attach the mounting plate to the ceiling (Image 3B).
- 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 mounted, or *horizontal* when wall mounted (Image 3A).
- Secure the mounting plate to the wall or ceiling with the anchors and screws provided (Image 3B). Use a 3/16" drill bit for anchors.
- For aesthetic reasons, the suggested position for wall mounting is as shown in Image 3C.

**NOTE: This alarm has a battery permanently sealed inside the alarm. No battery installation is necessary.**

## Activation

This model is equipped with a feature that automatically activates the alarm when the alarm is attached to the mounting plate for the first time. Once activated, the battery will supply power to the alarm for the life of the alarm (10 years). Be sure that the mounting plate is installed correctly before attaching the alarm to it.

- Install the alarm on the mounting plate and rotate the alarm in the direction of the “ON” arrow on the cover until the alarm ratchets into place (Image 3D). This ratcheting function allows for aesthetic alignment. Note: The alarm will attach to the mounting plate in 4 positions (every 90 degrees).

The alarm is now activated!

# Installation

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**CAUTION:** Due to the loudness (85 decibels) of the alarm, always stand an arms-length away from the unit when testing.

- After installation, test your alarm by depressing and holding down the Test button for a minimum of 5 seconds (or until the alarm sounds). This will sound the alarm if the electronic circuitry, horn, and battery are working. If the alarm does not sound, the unit has a defective battery or another failure.

## Mobile Homes

Mobile homes built in the past five to seven years have been designed to be energy efficient. Install smoke alarms as recommended in **Recommended Locations** and Image 2A.

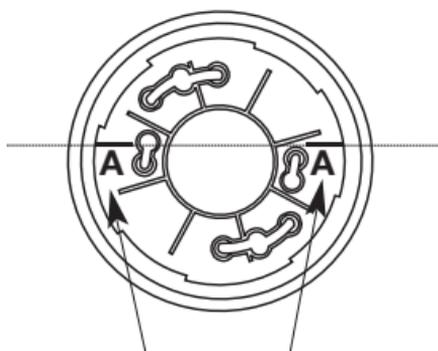
In mobile homes that are not well insulated compared to present standards, extreme heat or cold can be transferred from the outside to the inside through poorly insulated walls and roof. This may create a thermal barrier that can prevent the smoke from reaching an alarm mounted on the ceiling. In such units, install the smoke alarm on an inside wall with the top edge of the alarm at a minimum of 10 cm (4") and a maximum of 30.5 cm (12") below the ceiling (Image 2A).

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 Image 1A.

**WARNING:** Test your smoke alarm operation after mobile home vehicle has been in storage, before each trip and at least once a week during use.

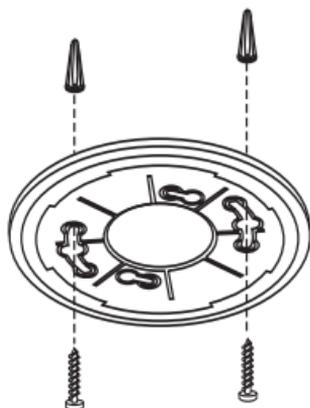
# Installation

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"A" LINE  
ALIGNMENT MARKS

**IMAGE 3A**

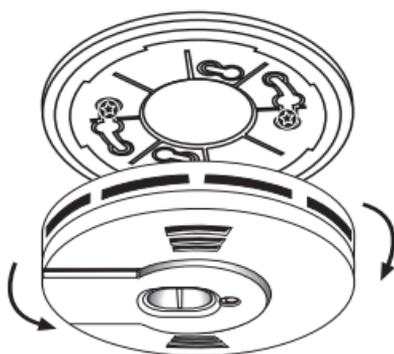


**IMAGE 3B**



SUGGESTED WALL  
MOUNTING POSITION

**IMAGE 3C**



ROTATE TO MOUNT OR  
TO REMOVE

**IMAGE 3D**

# Installation

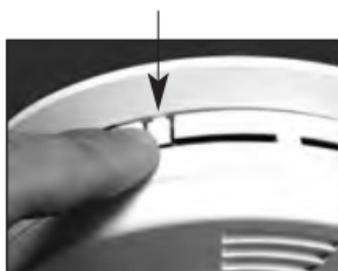
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## Alarm Tamper Resist Feature

This alarm is equipped with an automatic tamper resist feature that prevents someone from removing the unit from the mounting plate. The feature engages when the alarm is rotated onto the mounting plate.

Rotate the alarm onto the mounting plate until you hear the tamper resist tab snap into place, locking the alarm.

To remove the alarm, press on the tamper resist tab, and rotate the alarm off of the mounting plate (Image 4).



**IMAGE 4**

## Operation

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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.

This smoke alarm uses an extremely small amount of radioactive element in the ionization sensor chamber. Do not try to repair the smoke alarm yourself. Refer to the instructions in **Warranty** for service.

The smoke alarm is operating once the alarm is activated (see **Activation**) and testing is complete. When the smoke alarm ionization sensor chamber senses products of combustion, the horn will sound a loud (85db) alarm until the sensing chamber is cleared of smoke particles.

### False Alarms

Smoke alarms are designed to minimize false 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 that vents to the outside (non-recirculating type) will also help remove these combustible particles from the kitchen.

# Operation

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## **HUSH® Control Feature**

The Hush® button is extremely useful in a kitchen area or other areas prone to false alarms.

The Hush® feature has the capability of temporarily desensitizing the smoke alarm circuit for about 8 minutes. This feature is to be used only when a known alarm condition, such as smoke from cooking, activates the alarm.

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 **Locations to Avoid** may have caused 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 slowly (1 second on - 8 seconds off) for 7 to 9 minutes**. This indicates that the alarm is in a temporarily desensitized condition. The smoke alarm will automatically reset after approximately 8 minutes. If after this period particles of combustion are still present, the alarm will sound again.

The Hush® feature can be used repeatedly until the air has been cleared of the condition causing the alarm. Pushing the Test 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.**

# Operation

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## LED Indicator

This alarm is equipped with a red LED indicator, with four modes of operation.

**Red LED - Flashing every 40-45 seconds:** Indicates that the smoke alarm is receiving power and operating properly.

**Red LED - Flashing (1 second on - 1 second off):** When the smoke alarm senses particles of combustion and goes into alarm (constant pulsating sound), the red LED will flash (approximately one flash per second). The flashing LED and pulsating alarm will continue until the air is cleared.

**Red LED - Flashing slowly (1 second on - 8 seconds off):**  
Indicates that the unit is in the Hush® mode.

**Red LED - Flashing rapidly when the Test button is pressed:**  
This unit features an “alarm memory” to inform you if the alarm has sounded since the Test button was last pressed. The alarm memory will cause the red LED to flash rapidly when the Test button is pressed. The alarm memory is reset when the Test button is released.

# Maintenance

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## Testing

**NOTE: REGULAR WEEKLY TESTING IS REQUIRED!**

**CAUTION: Due to the loudness (85 decibels) of the alarm, always stand an arms length away from the unit when testing.**

Test by pushing the Test button on the cover and hold it for a minimum of 5 seconds (or until the alarm sounds). This will sound the alarm if all the electronic circuitry, horn and battery are working. If the alarm does not sound, the unit has a defective battery or some other failure. DO NOT use an open flame to test your alarm, you could damage the alarm or ignite combustible materials and start a 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 Warranty section).

Alarms failing an alarm test, or not operating normally, must be replaced with a new alarm. Similarly, alarms more than 10 years old must be replaced.

## Cleaning the Alarm

The alarm should be cleaned at least once a year.

- To clean your alarm, remove it from the mounting plate (see **Alarm Tamper Resist Feature** and **Alarm Removal** sections). You can clean the alarm by using compressed air or a vacuum cleaner hose with a soft brush attachment. Blow or vacuum around the perimeter of the alarm to remove dust and dirt. The outside of the alarm can be wiped with a damp cloth (do not use a wet cloth to avoid water entering the unit).
- After cleaning, reinstall your alarm and test your alarm by using the Test button. If cleaning does not restore the alarm to normal operation, the alarm should be replaced.
- Do not paint the unit. Paint will seal the vents and interfere with the sensor's ability to detect smoke. Never attempt to disassemble the unit or clean inside. This action will void your warranty.

# Maintenance

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## Alarm Removal

Refer to the Alarm Tamper Resist Feature section for removal instructions.

To remove the alarm from the mounting plate, rotate the alarm in the direction of the “OFF” arrow on the cover.

**WARNING: Do not attempt to open the alarm for any reason!**

## Battery

A Lithium-ion battery, permanently sealed inside the alarm, powers this unit. No battery installation or replacement is necessary for the life of the alarm.

This alarm has a low battery monitor circuit which will cause the alarm to “chirp” approximately every 40-45 seconds for a minimum of thirty (30) days at the end of the life of the alarm. Replace the *alarm* when this condition occurs.

## Deactivation

**WARNING: Do not deactivate the alarm until the end of the alarm life, when a "chirp" is heard every 40-45 seconds. Once the alarm is deactivated, the battery will be drained and the alarm will no longer function.**

**WARNING: Once the alarm has been deactivated, it cannot be reactivated and it cannot be reattached onto the mounting plate!**

To deactivate the alarm remove the alarm from the mounting plate and locate the black square on the back label.

Puncture the black square area with a screwdriver or similar tool then slide the exposed piece towards the center of the alarm. This will deactivate the alarm, stop the low battery “chirp” and render the alarm safe for disposal by draining the battery.

# Fire Safety

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**WARNING:** Please read carefully and thoroughly.

- NFPA Standard 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 sensing alarms may detect invisible fire particles (associated with fast flaming fires) sooner than photoelectric alarms. Photoelectric sensing alarms may detect visible fire particles (associated with slow, smouldering fires) sooner than ionization alarms. Home fires develop in different ways and are often unpredictable. For maximum protection, Kidde recommends that both ionization and photoelectric alarms be installed.
- A battery powered alarm must have a battery of the specified type, in good condition and installed properly.
- AC powered alarms (without battery backup) will not operate if the AC 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.

# Fire Safety

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- 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, landlords and tenants should have adequate insurance to protect their lives and property.

## Good Safety Habits

Develop and practice a plan of escape!

- 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.
- Make a floor plan indicating all doors and windows and at least two (2) escape routes from each room. Second story windows may need an escape 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, including fire drills at night. Ensure that small children hear the alarm and wake when it sounds. They must wake up in order to execute the escape plan. Practice allows all occupants to test your plan before an emergency. You may not be able to reach your children. It is important they know what to do.
- Current studies have shown smoke alarms may not awaken all sleeping individuals, and that it is the responsibility of individuals in the household that are capable of assisting others to provide assistance to those who may not be awakened by the alarm sound, or to those who may be incapable of safely evacuating the area unassisted.

## Alarm Exit Procedure

- Alert small children in the home.
- Leave immediately by your escape plan. Every second counts, so don't waste time getting dressed or picking up valuables.

## Fire Safety

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- 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 smokey. If possible do not breathe too deeply to avoid smoke inhalation. Breathe through a cloth (preferably 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 noted by the NFPA and UL. For instance:

- a) smoking in bed
- b) leaving children home alone
- c) cleaning with flammable liquids, such as gasoline
- d) fires where the victim is intimate with a flaming initiated fire; for example, when a person's clothes catch fire while cooking
- e) fires where the smoke is prevented from reaching the detector due to a closed door or other obstruction
- f) incendiary fires where the fire grows so rapidly that an occupant's egress is blocked even with properly located detectors

## 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.

# Fire Safety

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## Additional Recommendations

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

**Smoke Detection.** Where required by applicable laws, codes, or standards for the specified occupancy, approved single- and multiple-station smoke alarms shall be installed as follows: (1) In all sleeping rooms Exception: Smoke alarms shall not be required in sleeping rooms in existing one- and two-family dwelling units. (2) Outside of each separate sleeping area, in immediate vicinity of the sleeping rooms. (3) On each level of the dwelling unit, including basements Exception: In existing one- and two-family dwelling units, approved smoke alarms powered by batteries are permitted.

### Smoke Detection - Are More Smoke Alarms Desirable?

**Required number of smoke alarms (as shown in Image 1A and Image 1B):** 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.

Alarms 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.

## **Warranty**

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If after reviewing this manual you feel that your smoke alarm is defective in any way, do not tamper with the unit. In many cases, the quickest way to exchange your alarm is to return it to the original place of purchase.

Alternatively, you may return it for servicing to Kidde. If you have questions, call Kidde Customer Service at 1-800-880-6788.

### **10 Year Limited Warranty**

Kidde 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 ten years from the date of purchase.

The obligation of Kidde under this warranty is limited to repairing or replacing this smoke alarm or any part which we find to be defective in material, workmanship or design, free of charge to the customer, upon sending this smoke alarm with proof of date of purchase, postage and return postage prepaid, to Kidde Canada Inc., P.O. Box 40, Apsley, ON K0L 1A0. 1-800-880-6788.

This warranty shall not apply to this 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 AC or DC electrical power.

The liability of Kidde 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 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 provinces 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 province to province.

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