



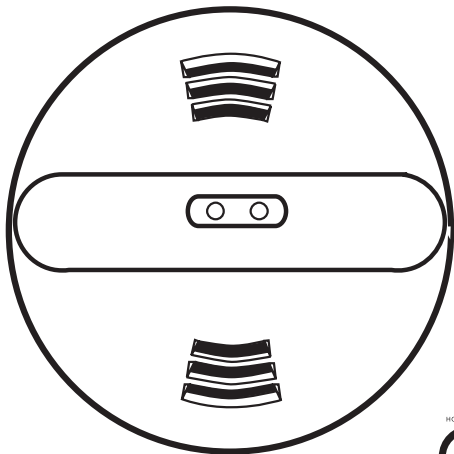
9 V Battery-Operated

# Dual Sensor Smoke Alarm

Photoelectric / Ionization with Hush®

## Alarm Manual

Model PI9000CA



Manual P/N 820-1062 Rev. A

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 smoldering 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.



SINGLE STATION  
SMOKE ALARM

# Contents

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130 Esna Park Drive, Markham ON L3R 1E3  
Consumer Hotline: 1-800-880-6788  
[www.kidde.ca](http://www.kidde.ca)

Made in China. Patents Pending

## Introduction

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### Model PI9000CA

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.

## Installation

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This product is designed to detect products of combustion using both an ionization sensor and a photoelectric sensor. The ionization sensor 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.

**WARNING! Removal of the smoke alarm battery will render the alarm inoperative. Battery door will not close unless battery is present.**

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

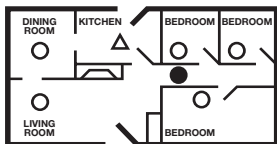
# Installation

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## Recommended Locations

- Locate the first alarm in the immediate area of the bedrooms. Try to monitor 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 monitor 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 an alarm not located in that room 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 centre 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**.

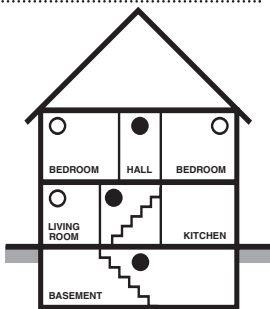
# Installation



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

**SINGLE FLOOR PLAN**

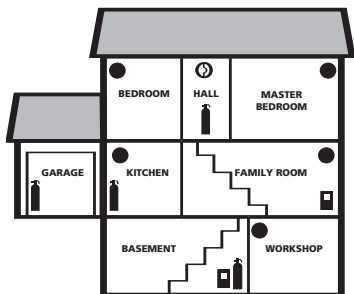
**IMAGE 1A**







**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' in 8') 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 and Image 2C).



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

**IMAGE 1C**

**TOTAL HOME PROTECTION**

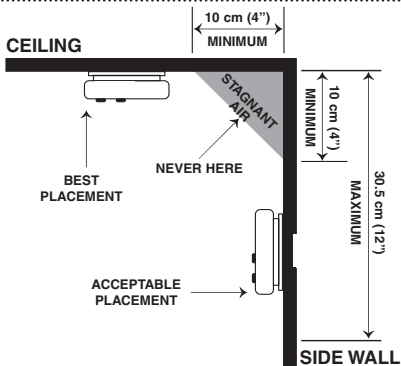
# Installation

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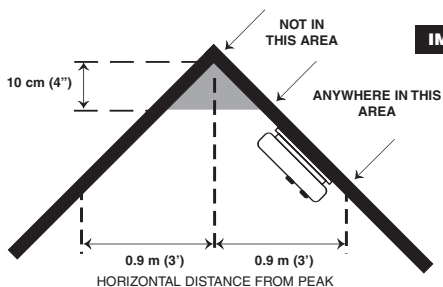
## Locations to Avoid

- 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 supply 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 or 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 a Hush® 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.

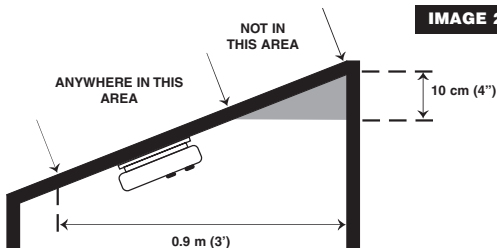
# Installation



**IMAGE 2A**



**IMAGE 2B**



**IMAGE 2C**

# Installation

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## Mobile Homes

Modern mobile homes have been designed to be energy efficient. Install smoke alarms as recommended in **Recommended Locations** and Image 2A.

In older 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 R.V. or mobile home vehicle has been in storage, before each trip and at least once a week during use.**

## Mounting

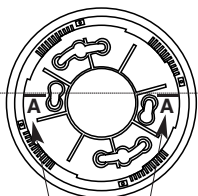
**CAUTION: This unit is sealed. The cover is not removable!**

- After selecting the proper smoke alarm location as described in Section 1, hold the mounting plate against the selected installation location (wall or ceiling) and mark the centre of the holes with a pencil. To ensure aesthetic alignment of the alarm with the hallway, or wall, the "A" line on the mounting plate should be parallel with the hallway when ceiling mounted or horizontal when wall mounted (Image 3A and 3B). Drill a hole through the pencil marks and use the enclosed screws and anchors to secure. Use 3/16" drill bit for anchor holes.



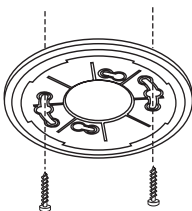
# Installation

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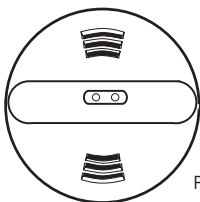


“A” LINE  
ALIGNMENT MARKS

**IMAGE 3A**

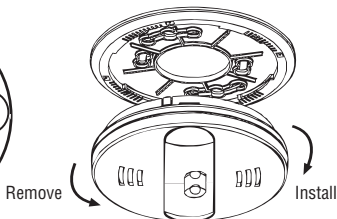


**IMAGE 3B**



WALL MOUNTING  
POSITION

**IMAGE 3C**



ROTATE TO MOUNT OR  
TO REMOVE

**IMAGE 3D**

- 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°).

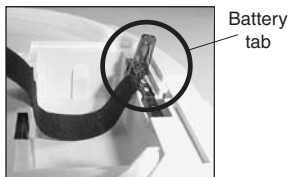
## Installation

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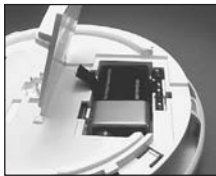
### Battery

This unit will not function without a properly installed battery. When installing a battery, press the battery reminder tab down into the battery compartment and install the battery (See **Image 4A** and **4B**). For initial installation a pre-installed 9 V battery is included with a battery pull tab that allows for easy connection.

**CAUTION: If the battery reminder tab 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 plate.**



**IMAGE 4A**



**IMAGE 4B**

### Testing

- After installation, test your alarm by depressing and holding down the test button for 5 seconds until the alarm sounds.

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

## Operation

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

# Operation

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## Hush® Control Feature

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 that vents to the outside (non-recirculating type) will also help remove these combustible particles from the kitchen. The Hush® button is extremely useful in a kitchen area or other areas prone to nuisance 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 every 2 seconds for approximately 8 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

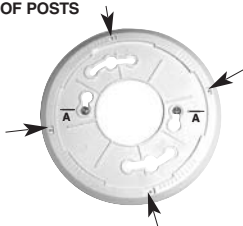
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## Alarm Tamper-Resist Feature

This alarm has a tamper-resist feature. This feature will help deter children or others from removing the alarm from the mounting plate.

Activate the tamper-resist feature by breaking off the four posts in the square holes in the mounting plate (see Image 5A). 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 the mounting plate.

### LOCATION OF POSTS



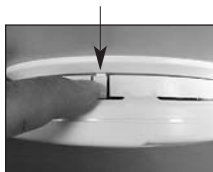
**IMAGE 5A**



**IMAGE 5B**



**IMAGE 5C**



**IMAGE 5D**

# Operation

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## LED Indicators

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 particles of combustion and goes into alarm, the red LED will flash rapidly (once 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 will be accompanied by an audible chirp. Replace the battery when this condition occurs.
<b>Alarm Memory</b>	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.

## Smoke Sensing Chamber Operation

The 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 **Battery Replacement** section for more information.

# Operation

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## 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 all the electronic circuitry, 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.

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 to place of purchase (see Warranty section).

**NOTE: WEEKLY TESTING IS REQUIRED!**

## Maintenance

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### Alarm Removal

If the smoke alarm tamper resist feature has been activated, 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.

### Battery Replacement

This smoke alarm uses a 9 V 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 seconds for a minimum of 7 days when the battery loses power. Replace when this condition occurs. Continued "chirping" after the battery replacement may indicate defective circuitry, and the alarm should be returned to place of purchase.

Use only the following 9 V batteries for replacement:

Alkaline Type	Energizer 522 Duracell MN1604 or MX1604 Gold Peak 1604A Panasonic 6AM6, 6AM-6, 6AM-6PI, 6AM6X, and 6LR61(GA)
Lithium Type	Ultralife U9VLJ

# Maintenance

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

**WARNING! Use only the batteries specified above. Use of different batteries than the recommended ones, may have a detrimental effect on the smoke alarm. A good safety measure is to replace the battery at least once a year, or at the same time you change your clocks for daylight saving time. Be sure to follow the battery installation instructions printed on the back of the alarm.**

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

NOTE: If after battery replacement the alarm continues to chirp, push the Test button. The Hush® feature may have been activated accidentally while changing the battery and pushing the Test button will end the Hush® cycle.

## **Cleaning the Alarm**

The alarm should be cleaned at least once a year.

- To clean your alarm, remove it from the mounting plate as outlined in previous 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.

## **Replacing the Alarm**

The National Fire Protection Association (NFPA) and Kidde recommend replacing this alarm **ten years** from the date code label (located on the back of the alarm).

# Fire Safety

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## 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 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.
- A.C. powered alarms (without battery backup) 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.



## **Fire Safety**

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- 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.

## **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 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.
- 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.

# Fire Safety

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## What To Do When The Alarm Sounds

- 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.
- 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.

## 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 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?

**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 (but not the battery) 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 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 Kidde, Customer Service Department, 130 Esna Park Drive, Markham, ON L3R 1E3. 1-800-880-6788.

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 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 this 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 this 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.

Also, Kidde 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.