

120V AC
Ionization
Smoke Alarm

FIREX[®]

Smoke Alarm

110-427K



MODEL G-6, H, GC PG40 and FXW-R

SIGNALING



**PLEASE READ AND SAVE
THIS MANUAL**

Installer: Please leave this manual with the occupier (or, in the case of a house in multiple operation, with the owner)

The ionization type alarms are generally more effective at detecting fast, flaming fires which consume combustible materials rapidly and spread quickly. Sources of these fires may include flammable liquids or paper burning in a waste container. The photoelectric type alarms are generally more effective at detecting slow, smoldering fires which smolder for hours before bursting into flame. Sources of these fires may include cigarettes burning in couches or bedding. However, both types of alarms are designed to provide adequate detection of both types of fires. If you desire the benefits of both systems, you should install smoke alarms that combine in one alarm both photoelectric and ionization sensing technologies.

SMOKE ALARM FEATURES

- Model PG40 and GC smoke alarms can be interconnected with as many as 11 other specific model smoke alarms (Model G-6, as many as 5).
- Model GC features False Alarm Control that temporarily silences nuisance alarms.
- Multi-purpose LED indicates that the smoke alarm is receiving AC power, working under normal operation, or in alarm.
- Loud alarm horn—85 decibels at 10 feet—sounds to alert you to a fire emergency.
- This alarm incorporates the internationally recognized horn signal for evacuation. During alarm mode, the horn produces three short beeps followed by a 2 second pause and then repeats. This pattern is somewhat different than the previous alarm sound, which continually beeped.
- Model FXW-R is a direct replacement for Firex models FX1014, FX1020, FX1106, and FXW-1A. Model FXW-R cannot be interconnected with any other smoke alarm.
- Test button checks smoke alarm operation.

IMPORTANT SAFETY INFORMATION PLEASE READ AND SAVE THESE INSTRUCTIONS



W A R N I N G

- **This smoke alarm requires constant 120-volt, AC power to operate.** It will not work if AC power is not connected or has failed or been interrupted for any reason. DO NOT turn off AC power to quiet false alarms. Open windows or fan the air around smoke alarm to silence it. The Push-to-Test button accurately tests all smoke alarm functions. DO NOT use any other test method. Test smoke alarm weekly. We recommend you install smoke alarms that operate from both battery and AC power. Having smoke alarms that work from two different power sources can give extra protection in case of a dead battery or an AC power failure. If you have repeated false alarms, move the smoke alarm to a different location, or install specialized smoke alarms with a False Alarm Control or a photoelectric sensor.
- **This smoke alarm should be installed only by a licensed, qualified electrician.** Observe and follow all local and national electrical and building codes for installation.
- **This smoke alarm is designed to be used INSIDE a single family household only.** In multi-family buildings, each individual living unit should have its own smoke alarms. It is not designed for use in common areas, stairwells, or common hallways in multi-family buildings.
- **This smoke alarm IS NOT designed to be the PRIMARY protection for buildings that require complete fire alarm systems.** Buildings of this type include hotels, motels, dormitories, hospitals, nursing homes, and group homes. This is true even if they were once single family homes. **However, this smoke alarm MAY be used inside individual rooms as SUPPLEMENTAL protection.**

- **DO NOT connect this smoke alarm to any other smoke alarm or devices except as specifically listed in this manual.** Model PG40, GC and FXW-R smoke alarms can be interconnected with up to 11 other specific model smoke alarms (Model G-6, as many as 5). **DO NOT use external bug screens or alarm guards.** This may cause improper operation.
- **Smoke alarms must not be used with detector guards** unless the combination of alarm and guard has been evaluated and found suitable for that purpose.
- **Smoke alarms sound their alarm horns when they detect smoke.** They do not detect heat, flame, or gas. They will not operate if smoke does not reach the smoke alarm.
- **We recommend that you install a smoke alarm in every room and on every level of the home.** Smoke may not reach the smoke alarm for many reasons. For example, if a fire starts in a remote part of the home, on another level, in a chimney, wall, roof, or on the other side of a closed door, smoke may not reach the smoke alarm in time to alert household members. A smoke alarm will not promptly detect a fire EXCEPT in the area or room in which it is installed.
- **Model G-6, PG40, GC and FXW-R smoke alarms meet all NFPA requirements for new and existing homes.** Per the National Fire Protection Association (NFPA) Standard 72, Chapter 2, this type of smoke alarm can be used to meet the minimum requirements for new and existing residential dwellings. The standard requires that smoke alarms for new residential dwellings be AC powered and interconnected. Therefore, Model G-6, PG40, and GC can be used to meet the minimum requirements for new construction residential dwellings.
- **Smoke alarms may not alert every household member every time.** There may be limiting circumstances where a household member may not hear the alarm (e.g., outdoor or indoor noise, sound sleepers, drug or alcohol usage, the hard of hearing, etc.). If you suspect that this smoke alarm may not alert a household member, install and maintain specialty smoke alarms. 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.
- **This smoke alarm will not provide adequate escape or rescue time in extremely fast moving fires.** Fast fires include gas fires, flammable liquid fires, or fires set on purpose. The smoke alarm will not give adequate escape time to people very close to the fire. Such examples might be, children playing with matches or smokers who fall asleep and drop a cigarette into their bed.
- **Smoke alarms have limitations.** This smoke alarm is not foolproof and is not warranted to protect lives or property from fire. Smoke alarms are not a substitute for insurance. Homeowners and renters should insure their lives and property. In addition, it is possible for the smoke alarm to fail at any time. **For this reason, you must test the smoke alarm weekly and replace it every 10 years.**

SMOKE ALARM PLACEMENT

Invensys Controls Americas recommends complete coverage protection achieved by installing a smoke alarm in every room of your home. The National Fire Protection Association's (NFPA) MINIMUM requirement for locating smoke alarms in family living units is detailed in NFPA Standard 72, Chapter 2. It reads as follows:

"2-2.1.1.1 Smoke detectors shall be installed outside of 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 detector also shall be installed in each sleeping room."

Further, section 2-2.2.1 states that:

"In new construction, where more than one smoke detector is required by 2-2.1, they shall be so arranged that operation of any smoke detector shall cause the alarm in all smoke detectors within the dwelling to sound."

The NFPA, 1993 Edition, Appendix A, however, clearly points out that:

"The required number of smoke detectors [as defined in the paragraphs above] may not provide reliable early warning protection for those areas separated by a door from the areas protected by the required smoke detectors. For this reason, it is recommended that the householder consider the use of additional smoke detectors for those areas for increased protection. The additional areas include: basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required smoke detectors."

Further, the California State Fire Marshal states that the minimum number of required smoke alarms is not enough to give the earliest warning under all conditions. The California State Fire Marshal states that:

"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 detector installed in each separate sleeping area (in the vicinity, but outside 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."

It is clear from the above abstracts that the earliest warning of a developing fire is best achieved by the installation of smoke alarms in all rooms and areas of the residence. Accordingly, Invensys Controls Americas recommends that you install smoke alarms in every room of your residence, even though this is not required by the typical code or standard.

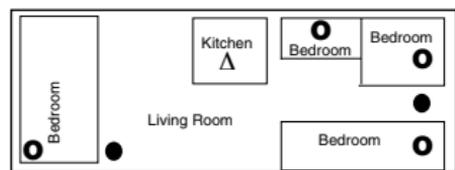
FOR MAXIMUM COVERAGE, WE RECOMMEND THAT YOU INSTALL A SMOKE ALARM IN EVERY ROOM OF THE HOME, INCLUDING BASEMENTS AND FINISHED ATTICS. In addition, we recommend interconnecting all smoke alarms capable of being interconnected.

Invensys Controls Americas recommends a minimum of two smoke alarms in every home, no matter how small the home (including efficiency apartments). Invensys Controls Americas also recommends maximum coverage by installing smoke alarms in both required and recommended locations as illustrated and described.

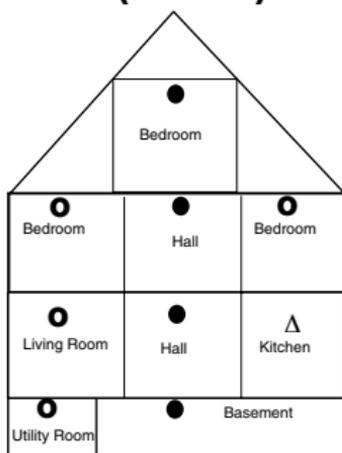
SMOKE ALARM PLACEMENT (Cont'd)

Existing Homes:

- The NFPA requires a smoke alarm on every level and outside each sleeping area in existing construction. An existing household with one level and one sleeping area is required to have one smoke alarm.



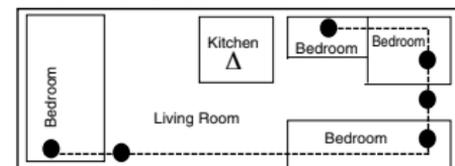
SINGLE STORY RESIDENCE/APARTMENT



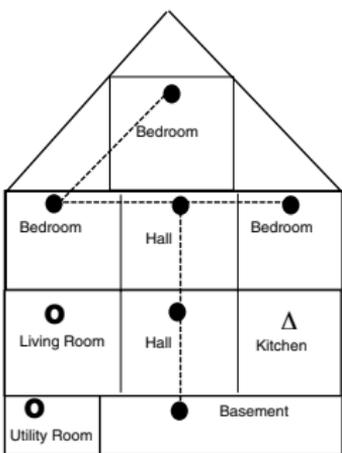
TWO STORY RESIDENCE

New Construction Homes:

- The NFPA requires AC-powered, interconnected smoke alarms to be installed inside each bedroom, outside each bedroom area, and on every level of the home. They also require a minimum of two AC-powered, interconnected smoke alarms in any new construction home.



SINGLE STORY RESIDENCE/APARTMENT



TWO STORY RESIDENCE

Key

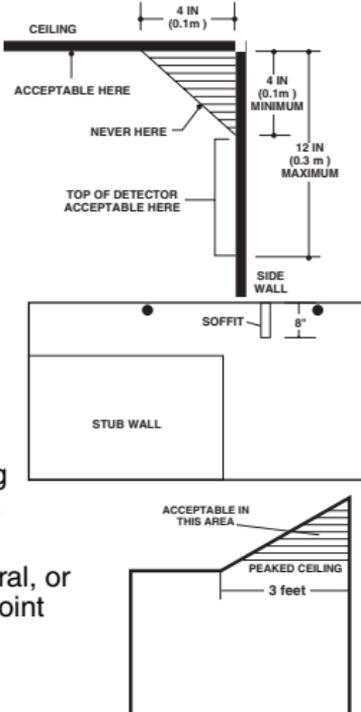
- **NFPA minimum REQUIRED smoke alarm locations**
- **Additional Smoke Alarm RECOMMENDED by Invensys Controls Americas, NFPA, and California State Fire Marshal**
- Δ **RECOMMENDED type with False Alarm Control**
- **Denotes interconnection**

Mobile Home Installation:

- For minimum protection, smoke alarms should be installed in compliance with H.U.D. Manufactured Home Construction Safety Standards Title 24 CFR, Section 3280.208 and Section 3282.
- For additional protection, see single story residence smoke alarm requirements/recommendations for existing homes and new construction above.

ADDITIONAL SMOKE ALARM PLACEMENT INFORMATION:

- If a bedroom area hallway is more than 30 feet long, install a smoke alarm at each end.
- In basements, install a smoke alarm on the ceiling at the bottom of the stairwell.
- Install a smoke alarm at the top of a first-to-second floor stairwell.
- Install a smoke alarm as close to the center of the ceiling as possible. If this is not practical, mount no closer than 4 inches from a wall or corner. Also, if local codes allow wall mounting, you may install smoke alarms on walls between 4 and 12 inches from ceiling/wall intersections.
- Install a smoke alarm in each room that is divided by a partial wall (either coming down from the ceiling at least 24 inches, or coming up from the floor).
- Install smoke alarms on peaked, cathedral, or gabled ceilings 3 feet from the highest point (measured horizontally).
- Install a smoke alarm in lived-in or finished attics.



NOTE: For mobile homes built before 1978, install smoke alarms on inside walls between 4 and 12 inches from the ceiling. (Older mobile homes have little or no insulation in the ceiling.) This is especially important if the ceiling is unusually hot or cold.

DO NOT install smoke alarms:



In areas where combustion particles are present. (Combustion particles are the by-products of something that is burning.) Areas to avoid include poorly ventilated kitchens, garages, near furnaces, or near hot water heaters. Place smoke alarm as far from the source of combustion particles as possible to prevent nuisance alarms.



In damp or very humid areas—such as bathrooms with showers—where the normal humidity may rise above 93% relative humidity. Areas above this humidity level can cause a false alarm.



In direct air flow nor within 3 feet of heating and cooling supply vents. Install at least 3 feet (0.9 meters) away from these areas. The air could blow smoke away from the detector, interrupting its alarm.



In rooms where temperatures may fall below 40°F (4°C) or rise above 100°F (38°C).



In extremely dusty, dirty, or insect-infested areas. Loose particles interfere with smoke alarm operation and may cause a nuisance alarm.



Within 3 feet of fluorescent lighting. Electrical noise may cause nuisance alarms.

HOW TO INSTALL THIS SMOKE ALARM

▲ DANGER: ELECTRICAL SHOCK HAZARD. Turn off power at the main fuse box or circuit breaker by removing the fuse or switching the circuit breaker to the OFF position.

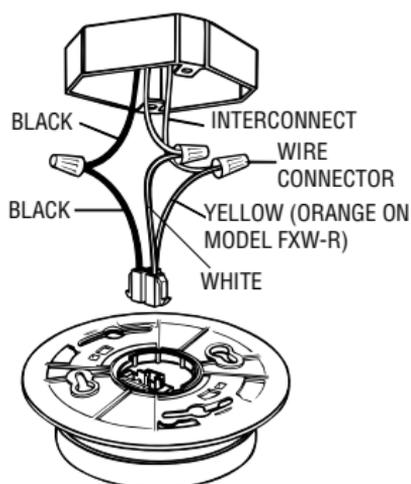
▲ WARNING: This smoke alarm should be installed only by a qualified electrician. Smoke alarm wiring to be used shall be in accordance with the provisions of Article 210 and 760 of the National Electrical Code, ANSI/NFPA 70, and any local codes that may apply. Interconnect wire location shall be in accordance with NEC Article 300.3b.

THIS SMOKE ALARM SHOULD BE INSTALLED IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION'S STANDARD 72 (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269).

Connect smoke alarms to a dedicated AC branch circuit. If local codes do not permit, be sure the neutral wire is common to both phases.

• Install smoke alarm on a 4-inch octagon or single gang junction box only.

1. From back of smoke alarm, unlock and remove mounting plate by turning plate counter-clockwise.
2. Align plate with mounting holes of a 4-inch octagon or single gang junction box.
3. Gently pull household wires through center hole of plate.
4. Secure plate to junction box.
5. With a small wire connector, connect white wire from connector plug to white household wire.
6. Connect black wire from connector plug to black household wire.
7. If interconnection is desired, connect yellow wire (orange on model FXW-R) from connector to interconnect wire between smoke alarms. See INTERCONNECTING SMOKE ALARMS.



▲ WARNING: Do not interconnect Firex smoke alarms with yellow interconnect leads to Firex smoke alarms with orange interconnect leads. Violating this warning will result in damage to the smoke alarm.

NOTE: If this will be a single-station smoke alarm, cover yellow wire (orange on model FXW-R) with electrical tape and tuck into junction box.

8. Attach connector plug to pins on back of smoke alarm. Plug will fit only one way.
9. Gently tug connector to be sure it is attached securely.
10. Position smoke alarm to mounting plate and turn clockwise to lock into place.

11. Turn on power at main fuse box or circuit breaker.
12. Test smoke alarm. See TESTING THE SMOKE ALARM.

INTERCONNECTING SMOKE ALARMS

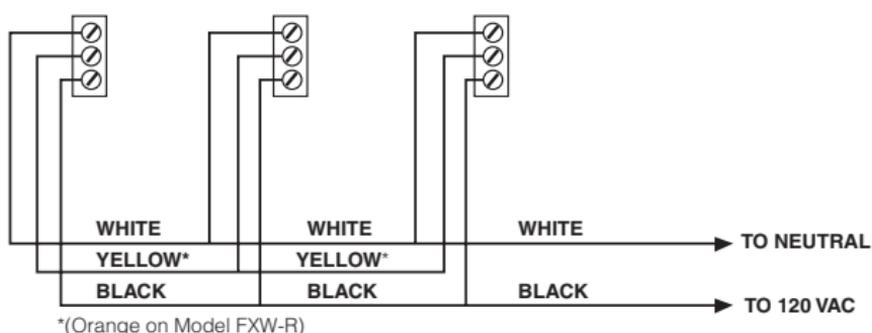
▲ WARNING: This smoke alarm should be installed only by a qualified electrician. Smoke alarm wiring to be used shall be in accordance with the provisions of Article 210 and 760 of the National Electrical Code, ANSI/NFPA 70, and any local codes that may apply. Interconnect wire location shall be in accordance with NEC Article 300.3b.

IMPORTANT: The model FXW-R is a direct replacement for Firex models FX1014, FX1020, FX1106 and FXW-1A. Model FXW-R cannot be interconnected with any other smoke alarm.

IMPORTANT: Do not interconnect Firex smoke alarms with yellow interconnect wires to Firex smoke alarms with orange interconnect wires.

IMPORTANT: Do not attempt to interconnect with any other type of device or manufacturer's brand.

- As many as 12 Model GC & PG40 (6 for Model G-6) smoke alarms may be interconnected.
- As many as 12 Model FXW-R smoke alarms may be interconnected.
- Connect smoke alarms to a dedicated AC branch circuit. If local codes do not permit, be sure the neutral wire is common to both phases.



LED INDICATORS

This smoke alarm features an LED indicator which can be seen through the Push-to-Test button. The LED indicates the following:

- | | |
|--|---|
| Blinks once a minute | — indicating normal operation. |
| Blinks once a second | — smoke alarm senses smoke and simultaneously sounds an audible alarm. |
| Blinks once approximately every 10 seconds | — False Alarm Control (FAC) feature activated (model GC only). |
| OFF
(Interconnected system only): | — another smoke alarm in the network has sensed smoke and is signalling this alarm. |

FALSE ALARM CONTROL

Model GC features a False Alarm Control that, when activated, quiets unwanted alarms for up to 15 minutes.

To use the False Alarm Control:

Press and release the test button during an unwanted alarm. The alarm should stop within ten seconds. This means the smoke alarm is in False Alarm Control.

If the smoke alarm does not go into False Alarm Control and continues to sound its loud alarm horn, or if it initially goes into False Alarm Control then resounds the alarm, the smoke is too heavy and a dangerous situation could exist—take emergency action.

NOTE: In an interconnected circuit, False Alarm Control must be activated on the initiating unit.

TESTING THE SMOKE ALARM

W A R N I N G

▲ DANGER: If alarm horn sounds, and smoke alarm is not being tested, the smoke alarm is sensing smoke. THE SOUND OF THE ALARM HORN REQUIRES YOUR IMMEDIATE ATTENTION AND ACTION.

- **Test each smoke alarm weekly** to be sure it is installed correctly and operating properly.
- **Test smoke alarms upon returning from vacation.** Also test when no one has been in the household for several days.
- **Stand at arm's length from the smoke alarm when testing.** The alarm horn is loud to alert you to an emergency. The alarm horn may be harmful to your hearing.
- The Push-to-Test button accurately tests all functions. **NEVER use an open flame** from a match or lighter to test this smoke alarm. You may ignite and set fire to the smoke alarm and your home.

Test all smoke alarms weekly as follows:

1. Look at the Push-to-Test button. A light flashing about once a minute indicates the smoke alarm is receiving 120V AC power. See LED INDICATORS above.
2. Firmly depress the Push-to-Test button for at least five (5) seconds. The smoke alarm will sound its horn loudly. The alarm may sound for up to 10 seconds after releasing the Push-to-Test button.
3. If smoke alarm does not sound, replace the smoke alarm immediately. If the smoke alarm is under warranty, see warranty information at the end of this manual for more information.

REPLACE OR RETURN THE ALARM IF THE PUSH-TO-TEST FUNCTION DOES NOT OPERATE PROPERLY AFTER FOLLOWING THE PROCEDURES OUTLINED ABOVE (see REPAIR below).

CLEANING

In addition to weekly testing, this smoke alarm requires periodic cleaning. Periodic cleaning will remove dust, dirt, and debris.

DANGER: ELECTRICAL SHOCK HAZARD. Turn off power at main service panel by removing fuse or switching appropriate circuit breaker to OFF position before cleaning smoke alarm.

CLEANING

Always turn off power to smoke alarm before cleaning. Clean the smoke alarm at least once a month to remove dust, dirt, or debris as follows:

- Using the wand attachment of a powerful vacuum cleaner, vacuum all sides and the cover of smoke alarm. Be sure all the vents are free of debris.
- If necessary, turn off power and use a damp cloth to clean smoke alarm cover.

IMPORTANT: Do not attempt to remove the cover or clean inside the smoke alarm. THIS WILL VOID YOUR WARRANTY.

REPAIR

CAUTION: Do not attempt to repair this smoke alarm. Doing so will void your warranty.

If smoke alarm is not operating properly, see TROUBLESHOOTING on page 7. If you cannot solve the problem, and if the alarm is still under warranty, return smoke alarm to Invensys Controls Americas. Pack it in a well-padded carton, shipping prepaid, to:

Invensys Controls Americas
Product Service Department
28C Leigh Fisher Blvd.
El Paso, TX 79906

If the smoke alarm is no longer under warranty, replace the smoke alarm immediately with a comparable Firex brand smoke alarm.

Firex Replacement Guide

You Have

You'll Need

Model	Model #	Item #
G-6	G-6 or GC	406 or 41216
G-18, G-120, H or GC	GC	41216
PG-40	PG-40	484
FXW-R, FX1014, FX1020 FXW-1A, or FX1106	FXW-R	428

PRACTICE FIRE SAFETY

Develop family escape plans, discuss them with ALL household members, and practice them regularly.

- Expose everyone to the sound of a smoke alarm and explain what the sound means.
- Determine TWO exits from each room and an escape route to the outside from each exit.
- Teach all household members to touch the door. **INSTRUCT THEM NOT TO OPEN THE DOOR IF THE DOOR IS HOT.** Tell them to use an alternative exit if the door is hot.
- Teach household members to crawl along the floor to stay below dangerous smoke, fumes, and gases.
- Determine a safe meeting place for all members outside the building.
- Know how to call the nearest fire department in case of emergency.

Besides practicing and understanding fire safety rules, you should:

- a. Install smoke alarms in every room of your residence.
- b. Test smoke alarms weekly.
- c. Maintain smoke alarms properly.
- d. Keep a supply of replacement batteries on hand.
- e. Replace nonworking smoke alarms immediately.
- f. Prevent hazardous conditions and follow fire safety rules:
 - Keep matches and cigarette lighters out of the hands of children.
 - Never smoke in bed.
 - Store flammables in proper, closed containers and do not use them near flame or sparks.
 - Keep electrical appliances in good condition.
 - Make sure stoves, fireplaces, chimneys, barbeque grills, and other appliances are clean and free of grease. Be sure they are properly installed and operating as designed.
 - Keep operating portable heaters and burning candles away from combustible materials. Watch them carefully.
 - Do not overload electrical circuits.

WHAT TO DO IN CASE OF A FIRE

1. **Don't panic; stay calm. Notify every member in the residence of the fire.**
2. **Have all residents leave the building as quickly as possible. Touch doors to feel if they are hot before opening them. Use an alternative exit if necessary. Crawl along the floor and cover your mouth and nose with a wet cloth, if possible. DO NOT stop to collect anything. Follow pre-defined escape plans, if possible.**
3. **Meet at a prearranged meeting place outside the building.**
4. **Call the fire department from OUTSIDE the building.**
5. **DO NOT GO BACK INSIDE A BURNING BUILDING. Wait for the fire department to arrive.**

These guidelines will assist you in the event of a fire. However, to reduce the chance that fires will start, practice fire safety rules and prevent hazardous situations.

TROUBLESHOOTING

⚠ DANGER: **ELECTRICAL SHOCK HAZARD. Always turn off power at main fuse box or circuit breaker before taking troubleshooting action.**

⚠ WARNING: **DO NOT disconnect AC power to quiet an unwanted false alarm. This will remove your protection. Fan the air around the smoke alarm or open a window to remove the smoke, dust, or water vapor causing the false alarm.**

PROBLEM	SOLUTION
Smoke alarm does not sound when tested. NOTE: Push and hold test button for at least five (5) seconds when testing.	Check that AC power is turned on.
LED blinks and alarm beeps simultaneously every 60 seconds.	Battery is low – REPLACE IT IMMEDIATELY!
LED blinks and 30 seconds later alarm beeps – repeats at 60 second intervals.	Unit inoperable. REPLACE OR RETURN FOR REPAIR IMMEDIATELY!
Smoke alarm sounds unwanted alarms when residents are cooking or taking showers.	Move smoke alarm to a new location. See SMOKE ALARM PLACEMENT or replace with model GC smoke alarm with False Alarm Control or model PG-40 photoelectric alarm.
Interconnected smoke alarms do not sound when system is tested.	Press and hold test button for at least five (5) seconds.
The alarm sounds different than I'm used to. It starts and stops.	The alarm is operating correctly. This alarm features the internationally recognized horn signal for evacuation. The horn pattern is 3 short beeps followed by a 2 second pause and then repeats.
Smoke alarm sounds unwanted alarms at intermittent times.	Clean smoke alarm (see page 6).
Smoke alarm is removed but beeping sound still emits from its ceiling location.	Something other than the smoke alarm is emitting the beeping.

REPLACE OR RETURN THE ALARM IF THE PUSH-TO-TEST FUNCTION DOES NOT OPERATE PROPERLY AFTER FOLLOWING THE PROCEDURES OUTLINED ABOVE (see REPAIR on page 6).

Smoke alarms must be replaced every 10 years. See date code on back of smoke alarm to determine age.

WARRANTY

Invensys Controls Americas warrants to the original consumer purchaser each new smoke alarm to be free from defects in material and workmanship under normal use and service for a period of five (5) years from date of purchase. Invensys Controls Americas agrees to repair or replace, at its option, any defective smoke alarm, provided that it is returned with postage prepaid and with proof of purchase date to Invensys Controls Americas. This warranty does not cover damage resulting from accident, misuse or abuse or lack of reasonable care of the product. This warranty is in lieu of all other express warranties, obligations, or liabilities. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO A PERIOD OF FIVE (5) YEARS FROM PURCHASE DATE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. IN NO CASE SHALL INVENSYS CONTROLS AMERICAS BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY ITS NEGLIGENCE OR FAULT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other legal rights which vary from state to state.