

# USI ELECTRIC, INC.

SIGNALING



## MODEL USI-7795 **SMOKE & CARBON MONOXIDE ALARM WITH SILENCE CONTROL**



### READ ALL INSTRUCTIONS

The smoke alarm uses an extremely small amount of a radioactive element in the ionization chamber. Do not tamper with radioactive sealed source or try to repair the smoke alarm yourself. Refer to instructions for repairs.

### LIMITATIONS AND FUNCTIONS

- This combination smoke/carbon monoxide (CO) alarm requires constant 120VAC power to operate properly.
- THERE ARE TWO BASIC SMOKE ALARM TYPES - IONIZATION AND PHOTOELECTRIC. Ionization smoke alarms (such as this smoke alarm) are your best overall choice for reliability and fast response time, since they quickly sense small "invisible" smoke particles and will also sense larger "visible" smoke particles. Photoelectric smoke alarms may respond more quickly in certain types of fires, for example - slow smoldering fires with large "visible" smoke particles. ALL TYPES OF SMOKE ALARMS HAVE LIMITATIONS. NO TYPE OF SMOKE ALARM CAN SENSE EVERY KIND OF FIRE OR SMOKE EVERY TIME.
- SMOKE ALARMS can sound an alarm only when smoke reaches their sensors. Smoke may not reach the smoke alarm QUICKLY ENOUGH to ensure safe escape. They do not sense heat, flame or gas (propane).
- ALL alarms have limitations. This combination smoke/CO alarm is not foolproof and is not warranted to protect lives or property. It is not a substitute for insurance.
- WARNING - SINCE A SMOKE OR CO ALARM WILL NOT WORK WITHOUT POWER, having an alarm(s) that works from two completely different power sources, such as an AC direct wire with battery backup can give you an extra measure of protection in case of an AC power failure or a dead battery.
- CO ALARMS are designed to detect carbon monoxide gas from any source of combustion that reaches their sensor. They are NOT designed to detect any other type of gas.
- USING A SMOKE ALARM IN A SMOKY AREA LIKE A KITCHEN, OR IN A HIGH HUMIDITY AREA NEAR A SHOWER, CAN CAUSE FALSE ALARMS. DO NOT TURN OFF THE AC POWER TO QUIET THE ALARM. A SMOKE ALARM WILL NOT HELP PROTECT YOU IF IT IS NOT POWERED. Properly locate your alarm to avoid nuisance alarms.
- A SMOKE ALARM MAY NOT ALWAYS WARN YOU ABOUT FIRES CAUSED BY CARELESSNESS AND SAFETY HAZARDS LIKE SMOKING IN BED, VIOLENT EXPLOSIONS, ESCAPING GAS, IMPROPER STORAGE OF FLAMMABLE MATERIALS, OVERLOADED ELECTRICAL CIRCUITS, CHILDREN PLAYING WITH MATCHES, NATURAL CAUSES SUCH AS LIGHTNING, OR ARSON. FIRE PREVENTION IS YOUR BEST SAFEGUARD.
- SMOKE ALARMS CANNOT DETECT FIRES IF THE SMOKE DOES NOT REACH THEM. Smoke from fires may not reach the sensing chamber and set off the alarm. One unit should be installed inside each bedroom or sleeping area.
- SMOKE ALARMS MAY NOT DETECT FIRE ON ANOTHER FLOOR OR AREA OF THE HOME. Recommended minimum protection is at least one unit in every sleeping area and every bedroom on every level of your home. Interconnected units may provide earlier warning than stand-alone units since all units alarm when one detects smoke.
- ALARMS MAY NOT BE HEARD. The alarm horn in this unit meets or exceeds current standards, but it may not be heard if: (1) the unit is located outside a closed or partially closed door; (2) residents recently consumed alcohol or drugs; (3) the alarm is drowned out by noise from stereos, TV's, air conditioners or other appliances or (4) if residents are hearing impaired or sound sleepers.
- Because it is possible for the alarm to fail at any time, you must test the alarm weekly and replace it every 7 years.
- SMOKE ALARMS ARE NOT TO BE USED WITH DETECTOR GUARDS UNLESS THE COMBINATION HAS BEEN EVALUATED AND FOUND SUITABLE FOR THAT PURPOSE.
- CURRENT STUDIES HAVE SHOWN SMOKE ALARMS MAY NOT AWAKEN ALL SLEEPING INDIVIDUALS AND THAT IT IS THE RESPONSIBILITY OF INDIVIDUALS IN THE HOUSEHOLD WHO 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.

## **IMPORTANT SAFETY INFORMATION**

### **About this Alarm**

This combination alarm has separate sensors to detect smoke and carbon monoxide (CO). The smoke alarm has priority over the CO alarm.

The combination smoke/CO alarm is designed to be used in ordinary indoor locations of single-family households only.

The sensitivity of both the smoke and CO sensors and the horn patterns for both warnings, comply with UL standards.

This combination smoke/CO alarm can be used as a replacement for all USI ELECTRIC Smoke and CO Alarms without additional wiring. This allows the user to easily upgrade from individual smoke or CO alarms to a combination unit.

### **WHAT YOU SHOULD KNOW ABOUT CARBON MONOXIDE (CO)**

Carbon monoxide (CO) is an insidious poison. It is a colorless, odorless, tasteless gas. It is a cumulative poison. Even low levels of CO have been shown to cause brain and other vital organ damage in unborn infants with no effect on the mother.

The following symptoms are related to CARBON MONOXIDE POISONING and should be discussed with ALL members of the household:

#### **MILD EXPOSURE**

Slight headache, nausea, vomiting, fatigue (often described as "flu-like" symptoms).

#### **MEDIUM EXPOSURE**

Severe throbbing headache, drowsiness, confusion, fast heart rate.

#### **EXTREME EXPOSURE**

Unconsciousness, convulsions, cardiorespiratory failure, death.

Many cases of reported CARBON MONOXIDE POISONING indicate that victims are aware they are not well, but they become so disoriented that they are unable to save themselves by either exiting the building or calling for assistance. Young children and household pets may be the first affected.

Your combination smoke/CO alarm is designed to detect the toxic CO fumes that result from incomplete combustion, such as those emitted from appliances, furnaces, fireplaces and auto exhaust.

### **CAUTION!**

This alarm will only indicate the presence of carbon monoxide gas surrounding its sensor. Carbon monoxide gas may be present in other areas.

### **WARNING!**

This product is intended for use in ordinary indoor locations of family living units. It is not designed to measure compliance with Occupational Safety and Health Administration (OSHA) commercial or industrial standards. Individuals with medical problems may consider using warning devices which provide audible and visual warnings for carbon monoxide concentrations under 30 PPM.

### **WHAT YOU SHOULD DO IF THE CO ALARM SOUNDS**

Never disconnect a combination Smoke/CO alarm to silence an alarm. The alarm will automatically sense when the level of CO in the air falls below the danger level. You should stay outside the residence in fresh air until the alarm is silenced. When the alarm sounds, do not stand too close to the alarm. The sound produced by the alarm is loud because it is designed to awaken a person in an emergency. Prolonged exposure to the alarm at a close distance may be harmful to your hearing.

Two self-adhesive labels have been provided with instructions indicating what to do if the CO alarm sounds. Add the phone numbers of your emergency services provider and a qualified technician to each label. Place one of the labels in a visible area next to the alarm and place the other label near a source of fresh air which will be used as a gathering place if the alarm sounds.

## **WHAT YOU SHOULD DO IF THE SMOKE ALARM SOUNDS**

### **YOU MUST QUICKLY DO THE FOLLOWING:**

If the smoke alarm sounds and you have not pushed the test button, it is a warning of a dangerous situation.

Your immediate response is necessary. To prepare for such occurrences, develop family escape plans, discuss them with ALL household members and practice them regularly.

### **BASICS OF ESCAPE PLAN**

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

### **WHAT TO DO WHEN THE SMOKE ALARM SOUNDS**

- o Leave immediately by your plan of escape. Every second counts, so don't waste time getting dressed or picking up valuables.
- o 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 inside door is cool, place your shoulder against it, open it slightly and be ready to slam it shut if heat and smoke rush in.
- o Stay close to the floor if air is smoky. Breathe shallowly through a cloth, wet if possible.
- o Once outside, go to your selected meeting place and make sure everyone is there.
- o Call the fire department from your neighbor's home – **not from yours!**
- o Don't return to your home until fire officials say that it is all right to do so.

## **IMPORTANT CONSIDERATIONS**

**YOUR COMBINATION SMOKE/CO ALARM HAS BEEN DESIGNED WITH AN END-OF-SERVICE LIFE OF APPROXIMATELY SEVEN YEARS FROM INITIAL POWER UP.**

**NOTE: MANUFACTURER RECOMMENDS REPLACEMENT OF ALARM SEVEN YEARS AFTER DATE OF INSTALLATION.**



Activation of this device indicates the presence of carbon monoxide (CO) which can kill you. If the CO alarm sounds:

1. Operate test/reset button;
2. Call your emergency services, fire department or 911; (Phone No. \_\_\_\_\_).
3. Immediately move to fresh air - outdoors or by an open door/window. Do a head count to check that all persons are accounted for. Do not reenter the premises nor move away from the open door/window until the emergency services responders have arrived, the premises have been aired out, and your alarm remains in its normal condition.
4. After following steps 1-3, if your alarm reactivates within a 24 hour period, repeat steps 1-3 and call a qualified appliance technician; (Phone No. \_\_\_\_\_) to investigate for sources of CO from fuel burning equipment and appliances and inspect for proper operation of this equipment. If problems are identified during this inspection, have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturers' instructions or contact the manufacturer(s) directly for more information about CO safety and this equipment. Make sure that motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

## **INSTALLING THE COMBINATION SMOKE/CO ALARM FOR RESIDENTIAL USE**

### **LOCATION**

Before installing your combination smoke/CO alarm, it is important to choose the best locations in your home. Placement can affect how well the alarm performs and how well residents hear the alarm if it sounds. Statistics of the National Fire Protection Association (NFPA) show that most of the fatal CO occurrences happen at night while people are sleeping.

# INSTALLING THE COMBINATION SMOKE/CO ALARM FOR RESIDENTIAL USE

## LOCATION

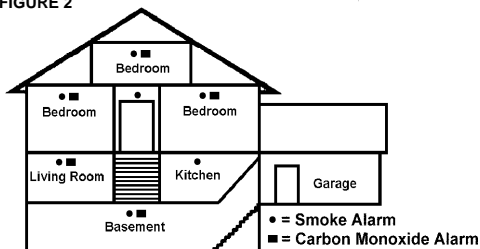
Before installing your combination smoke/CO alarm, it is important to choose the best locations in your home. Placement can affect how well the alarm performs and how well residents hear the alarm if it sounds. Statistics of the National Fire Protection Association (NFPA) show that most of the fatal CO occurrences happen at night while people are sleeping.

Early warning of CO is best achieved by the installation of CO alarms on all floors and areas of the household.

## RECOMMENDATIONS

- Put a CO alarm inside each bedroom where the occupant closes the door while sleeping. Particulate smoke can be blocked by a closed door, but CO fumes are likely to get through.
- A CO alarm should be installed between 5 and 20 feet from potential sources of CO in any family living unit containing a fuel-burning appliance or fireplace or having an attached garage.
- A combination smoke/CO alarm should be centrally located outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where bedrooms are separated and audibility of the alarm to occupants within the bedroom area could be seriously impaired, more than one unit could be needed.
- If a bedroom area hallway is more than 30 feet long, install a smoke alarm at each end.
- Alarms can alert you to a problem only after smoke or CO reach their sensors. Choose locations free of obstructions, where the alarm will stay clean and protected from adverse environmental conditions.
- Install a smoke or combination alarm on the basement ceiling at the bottom of the stairwell.
- Make sure the alarms can be easily heard from multiple locations throughout the home.
- This combination smoke/CO alarm makes it easy to provide both types of protection throughout the the home.
- This combination smoke/CO alarm is designed to be used in single-family homes. It alone may not meet requirements for multiple-resident dwellings (apartment buildings, boarding houses, hotels or motels).
- Some codes may require that smoke alarms be interconnected in new construction.

FIGURE 2



RECOMMENDED COMBO ALARM PROTECTION  
FOR A MULTI-LEVEL RESIDENCE

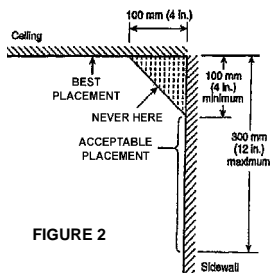
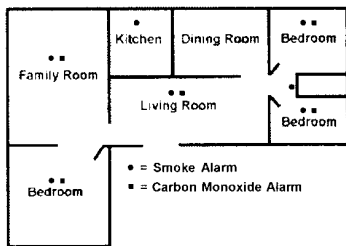


FIGURE 2

FIGURE 3



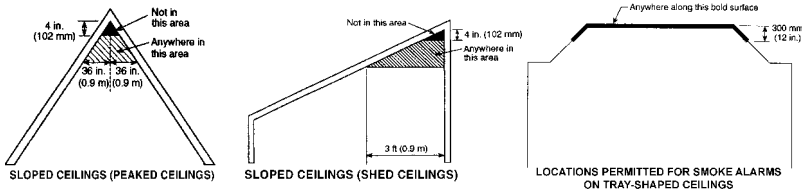
RECOMMENDED COMBO ALARM PROTECTION  
FOR A SINGLE-FLOOR RESIDENCE

### 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.

### New Construction Homes and Manufactured 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.



### Sloped Ceilings (Peaked Ceilings):

Smoke alarms or smoke detectors mounted on a peaked ceiling shall be located within 36 in. (914 mm) horizontally of the peak, but not closer than 4 in. (102 mm) vertically to the peak.

### Sloped Ceilings (Shed Ceilings):

Smoke alarms or smoke detectors mounted on a sloped ceiling having a rise greater than 1 ft. in 8 ft. (1 m in 8 m) horizontally shall be located within 36 in. (914 mm) of the high side of the ceiling, but not closer than 4 in. (102 mm) from the adjoining wall surface.

### Tray-Shaped Ceilings:

Smoke Alarms or smoke detectors shall be installed on the highest portion of the ceiling or on the sloped portion of the ceiling within 12 in. (305 mm) vertically down from the highest point.

### 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 Homes.

**Note:** For mobile homes built before 1978, install smoke alarms on inside walls between 4" and 12" 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.

Install a smoke alarm inside each bedroom and in the hallway outside each separate sleeping area.

## AVOID THESE LOCATIONS

- the garage – products of combustion are present when you start your automobile.
- in areas with high humidity, like bathrooms or areas near dishwashers or washing machines. Install at least 3 feet (0.9 meters) away from these areas.
- in areas of turbulent air such as air returns or heating and cooling supply vents. Install at least 3 feet (0.9 meters) away from these areas.
- in extremely dusty, dirty or insect-infested areas. Loose particles interfere with smoke alarm operation.
- in areas where temperature may fall below 40°F (4.4°C) or rise above 100°F (37.8°C).
- closer than 5 feet (1.5m) from fluorescent lights, electrical "noise" and flickering may affect the alarm's operation.
- do not locate this alarm within 5 feet (1.5m) of any cooking appliance.
- in areas of reverse venting of fuel burning appliances caused by outdoor ambient conditions, such as:
  - wind direction and/or velocity, including high gusts of wind. Heavy air in the vent pipes (cold/humid air with extended periods between cycles).
  - negative pressure differential resulting from the use of exhaust fans.
  - simultaneous operation of several fuel burning appliances competing for limited internal air.
  - vent pipe connections vibrating loose from clothes dryers, furnaces or water heaters.
  - unusual vent pipe designs in or unconventional vent pipe designs which can amplify the above situations.
  - operation of unvented fuel burning devices (range, oven, fireplace, etc.).
  - air inversions which can trap exhaust gasses near the ground.
- in a garage or near a home.
- in the alarm's alarm circuit, accommodation spaces
- where other contaminants such as cleaning supplies or similar contaminants are used.

**THIS COMBINATION SMOKE/CO ALARM WILL NOT WORK WITHOUT 120 VAC POWER AND A GOOD BATTERY PROPERLY INSTALLED. THE ALARM SHOULD BE TESTED WHEN INSTALLED AND THEN TESTED WEEKLY AFTER THAT.**

**⚠ WARNING!**

**INSTALLATION AND OPERATION**

**INSTALLATION INSTRUCTIONS: CAUTION!! READ CAREFULLY.**

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

- This combination smoke/CO alarm requires constant 120 Volt AC power AND/OR a working 9 Volt battery to operate properly. This combination smoke/CO alarm WILL NOT work if AC power is not connected or if it has failed or been interrupted for any reason AND the battery is removed, drained or improperly connected. DO NOT use any other kind of battery except as specified in this manual.

**NOTE:** AC/DC combination alarms offer added protection in the event of a power failure or a drained battery.

- **Test alarm immediately following installation** and weekly for proper operation by pushing the test button. The alarm will then test itself for proper operation. The alarm then resumes normal operation.
- A mounting plate is provided on the back of the alarm.
- 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 "TURN TO REMOVE" arrow on the side of the alarm base.

*Installation of this unit must conform to the electrical codes in your area; Article 760 of the National Electrical Code, NFPA 720/CO Alarms, NFPA 72, 101; SBC (SBCCI); UBC (ICBO); NBC (BOCA): OTFDC (CABO), and any other local or building codes that may apply. Wiring and installation must be performed by a licensed electrician. Failure to follow these guidelines may result in injury or property damage.*

*This unit must be powered by a 24-hour, 120V AC 60Hz circuit. Be sure the circuit cannot be turned off by a switch, dimmer or ground fault circuit interrupter. Failure to connect this unit to a 24-hour circuit may prevent it from providing constant protection.*

*IMPORTANT: Do not subject this alarm to megger, high voltage or high-pot tests. Remove the alarm(s) before high-potting tests occur on the circuit or system. (Ref. Section 550-17, National Electric Code, 2002 Edition).*

**⚠ DANGER!**

**ELECTRICAL SHOCK HAZARD**

*Turn off power to the area where you will install this unit at the circuit breaker or fuse box before beginning installation. Failure to turn off the power before installation may result in serious electrical shock, injury or death.*

**TAMPER LOCKING PIN:** To make your alarm somewhat tamper resistant, a locking pin has been provided (break-away part of mounting plate). Using this tamper pin will deter children and others from removing the alarm from the mounting plate. To use the tamper pin, insert it into the hole in the side of the alarm after the alarm has been installed on the mounting plate. Using long nose pliers, pull the tamper pin out of the hole. It is now possible to remove the alarm from the mounting plate.

1. Turn the alarm counterclockwise in the direction indicated by the "TURN TO REMOVE" arrow on the side of the alarm base to remove it from the mounting plate. NOTE: The alarm is sealed and the cover is not removable.
2. Wiring Instructions:
  - a. The appropriate power supply is 120 Volt single phase power supplied from a non-switchable circuit NOT protected by a ground fault circuit interrupter.
  - b. Turn off main power to the circuit before wiring the alarm.
  - c. There are three pigtail leads (black, white and yellow) coming from the AC QUICK CONNECTOR. The proper wire connection is as follows:

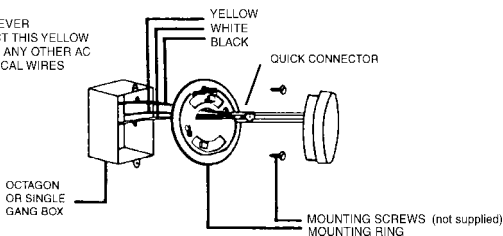
**WIRES FROM QUICK CONNECTOR**

BLACK  
WHITE  
YELLOW

**CONNECT TO**

"HOT" side of AC line  
"NEUTRAL" side of AC line  
Interconnect wires of other units

NOTE: NEVER CONNECT THIS YELLOW WIRE TO ANY OTHER AC ELECTRICAL WIRES



## CAUTION!

For units that are used as single alarms, do not connect the yellow wire to anything. Insulate this wire (tape it) in place to make certain the yellow wire cannot contact any metal parts.

This alarm can share the interconnect wire of carbon monoxide, smoke and heat alarms. The alarm will automatically sound a smoke alarm signal if smoke is detected by this unit or any other interconnected smoke alarm, even if the unit is already detecting carbon monoxide and sounding the carbon monoxide alarm signal.

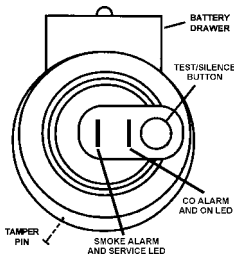
Interconnected units can provide earlier warning of fire than stand-alone units, especially if a fire starts in a remote area of the dwelling. This combination alarm may be interconnected with as many as 11 other USI ELECTRIC or UNIVERSAL model smoke alarms or heat alarms and 6 other units which may be USI ELECTRIC or UNIVERSAL Carbon Monoxide Alarms and 6 other non-initiating devices such as USI ELECTRIC or UNIVERSAL relays, for a total of not more than 24 interconnected devices.

Interconnected CO alarms will only respond if a CO alarm/event initiates the alarm. All other alarms remain silent.

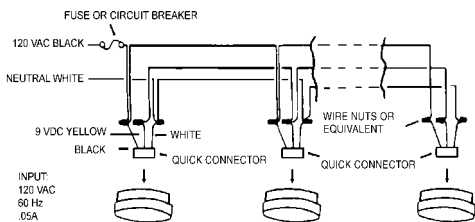
NOTE: Relay modules/USI-960 will not respond if a CO alarm/event initiates the alarm.

Interconnected smoke alarms, heat alarms and relay modules will only respond if a smoke alarm/event or heat alarm/event initiates the alarm. All CO alarms remain silent.

NOTE: Units without battery backup will not respond during an AC power failure.



INPUT:  
120 VAC  
60 HZ  
100 mA



MULTIPLE UNIT INSTALLATION SET-UP

The yellow wire is used only for multiple station operation with Universal or USI Electric Model alarms. Connecting this yellow wire to any other circuits may result in damage. When alarms are interconnected, all units must be powered from a single AC branch circuit. If local codes do not permit be sure the neutral wire is common to both phases. The maximum wire run distance between the first and last alarm/device in an interconnected system is 1,000 feet. NOTE: Use standard household wire (18 gauge or larger, rated at least 300V, as required by local codes) available at all electrical supply/hardware stores.

The wiring to be used shall be in accordance with the provisions of Articles 210 and 300.3(B) of the National Electrical Code, ANSI/NFPA 70. In addition, the resistance of the interconnecting wiring shall be a maximum of 10 Ohms.

3. Attach the mounting plate to the electrical junction box.
4. Plug the AC QUICK CONNECTOR into the alarm base. Push and turn the alarm clockwise onto the mounting plate.

5. To activate 9 volt battery and alarm, hold the QUICK DRAW<sup>®</sup> pull-out battery drawer closed, pull and remove the PULL-TAB. Discard PULL-TAB.
6. See "TAMPER LOCKING PIN."
7. Turn on AC power and press the TEST/RESET button. Check the LED's for proper operation (see "TESTING YOUR ALARM"). After test sequence, the Green LED lights to indicate AC power and blinks off approximately every 20 seconds to indicate proper operation.

## OPERATION, TESTING & MAINTENANCE

**OPERATION:** The alarm is operating once the power is connected and turned on (the battery must also be installed).

**SMOKE/COMBUSTION PRODUCTS ALARM CONDITION:** When products of combustion are sensed, the unit sounds a loud SMOKE alarm pattern which continues until the air is cleared. For the SMOKE alarm pattern, this alarm incorporates the internationally recognized horn signal for evacuation. During smoke alarm mode, the horn produces three beeps followed by a two second pause and then repeats.

**CARBON MONOXIDE CONDITION:** When CO is sensed at a high level or at a low level for a lengthy period of time, the unit sounds a loud CO alarm pattern (4 short horn pulse, pause, repeat) which continues until the air is cleared or the alarm is reset. The Red LED will flash on simultaneously with the horn pulses.

**NOTE:** To reduce the possibility of nuisance tripping of the alarm's alarm circuit, accommodation spaces are to be well ventilated when household cleaning supplies or similar contaminants are used.

**SERVICE/TROUBLE CONDITION:** Periodically, the alarm's circuitry is tested. If an error is detected, the alarm will sound a double "beep" and the Yellow LED will flash on twice approximately every 40 seconds. If this occurs, reset your alarm (see "RESETTING YOUR ALARM"). If the SERVICE/TROUBLE signal persists, it is an indication of circuit malfunction and that the alarm requires immediate servicing.

**TESTING YOUR ALARM:** Test alarm weekly for proper operation by pushing, then releasing, the TEST/SILENCE button. The alarm will then test itself for proper operation of BOTH the SMOKE and CO detection and alarm circuits. The Red LED will begin to flash rapidly and the alarm will indicate two cycles of the SMOKE alarm pattern. The Red LED will stop flashing during the second SMOKE alarm pattern. This will be followed by two cycles of the CO alarm pattern, during which the Green LED is off, the Yellow LED is on and the Red LED flashes on simultaneously with the horn pulses.

**RESETTING YOUR ALARM:** To reset your alarm, initiate the Test cycle per TESTING YOUR ALARM above. While the alarm is indicating the CO alarm patterns of the Test Cycle, press the TEST/SILENCE button again and HOLD it until the Test Cycle is completed (when the Yellow LED turns off, approximately 5 seconds).

**STANDBY (NON-ALARM) CONDITION:** Whenever AC power is present, the Green LED is on and blinks off approximately every 20 seconds and the Red LED is off and flashes on every 40 seconds. If powered by the backup battery (DC) only, both the Green and the Red LED's are off and flash on every 40 seconds.

**LOCAL (ORIGINATING ALARM) CONDITION:** For BOTH the SMOKE and CO alarm conditions, the Red LED flashes on rapidly and the unit emits a loud, pulsating alarm (refer to the OPERATION section to differentiate between the SMOKE and CO alarm patterns).

**REMOTE (NON-ORIGINATING ALARM) CONDITION:** For BOTH the SMOKE and CO alarm conditions, the Red LED is off and the unit emits a loud, pulsating alarm (refer to the OPERATION section to differentiate between the SMOKE and CO patterns).

**INITIATING ALARM INDICATOR (IAI) CONDITION:** Whenever a unit comes out of the LOCAL ALARM CONDITION, it will display an IAI until manually reset (see "RESETTING YOUR ALARM"). If the unit indicated a SMOKE alarm, the IAI is the Red LED flashing on for 1 second every 5 seconds. If the unit indicated a CO alarm, the IAI is the Green LED which flashes on for 1 second, then off for 1 second and then repeats this cycle until it is manually reset (see "RESETTING YOUR ALARM").

**END-OF-SERVICE LIFE CONDITION:** When the alarm sounds 3 chirps and the yellow alarm light flashes 1 time during the first chirp, it indicates the "End-of-Service Life" of the alarm. This alarm signal cannot be reset. The alarm should be replaced immediately.



## **⚠️WARNING!**

NEVER use an open flame of any kind to test this unit. You might accidentally damage or set fire to the unit or to your home. The built-in test switch accurately tests the unit's operation as required by Underwriters Laboratories Inc. (UL).

## **⚠️CAUTION!**

If you choose to use an aerosol smoke product to test the smoke alarm, be certain to use one that has been Listed to Underwriters Laboratories, Inc. Safety Standards and use it only as directed. Use of non-UL Listed products or improper use of UL Listed products may affect the smoke alarm's sensitivity.

## **⚠️CAUTION!**

Before using the alarm "test/silence" feature, identify the source of smoke or CO and be certain that safe conditions exist.

**FALSE ALARMS "TEST/SILENCE" CONTROL:** Units with the "silence" feature have the capability of temporarily reducing the sensitivity of the smoke alarm circuit for approximately 3-9 minutes. This feature is to be used only when a known alarm condition such as smoke from cooking activates the smoke alarm. The smoke alarm "silence" feature is activated by pushing the Test/Silence button on the smoke alarm cover for at least three seconds. The smoke alarm will automatically reduce sensitivity and the Red LED will light for approximately 3-9 minutes to indicate the alarm is in the temporary silent condition. The smoke alarm will gradually regain normal sensitivity and sound the alarm if particles of combustion are still present. The "silence" feature may be used repeatedly until the air has cleared.

When AC power is lost, the Green LED is off and flashes on approximately every 40 seconds.

## **⚠️DANGER!**

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

**MAINTENANCE:** This combination alarm is virtually maintenance free. However, under dusty conditions, a vacuum hose may be used to clear the sensing chamber of dust.

Clean the alarm at least once a month to remove dust, dirt or debris. Always turn off power to alarm before cleaning. Using a soft brush or wand attachment to a vacuum cleaner, vacuum all sides and cover of alarm. Be sure all the vents are free of debris.

**END-OF-SERVICE LIFE NOTIFICATION:** A majority of home fire deaths are a result of no smoke alarms or no *working* smoke alarms. In addition to the "replace by date" stamped on the back of your alarm, your alarm contains a unique audible end-of-service life notification feature. When it is time to replace your alarm, which is approximately 7 years of operation, i.e. from initial power up, the alarm will sound 3 chirps every 40 seconds and the yellow LED will blink on in synch with the first chirp. The green LED stays on. This alarm signal cannot be reset. The alarm should be replaced immediately.

## **⚠️WARNING!**

The outside of the alarm can be wiped with a damp cloth. Do not use any household cleaning agents, ammonia-based cleaners, paints, varnishes or any other chemical on or near your alarm. **AFTER CLEANING, REINSTALL YOUR ALARM. TEST YOUR ALARM BY USING THE TEST BUTTON.**

**NOTE:** To reduce the possibility of nuisance tripping of the alarm's alarm circuit, accommodation spaces are to be well ventilated when household cleaning supplies or similar contaminants are used.

If the smoke/CO alarm is false alarming or indicating service and cannot be restored to normal operation, the alarm should be replaced.

## **▲WARNING!**

### **BACKUP BATTERY REPLACEMENT**

**Disconnect AC power before changing battery. Shock hazard exists if AC power is miswired.**

This alarm uses a 9 Volt Alkaline battery. The battery should last for at least one year under normal operating conditions. The alarm has a low battery indicator, an audible "beep." It will operate at 30-40 second intervals for a minimum of 7 days. When this indication occurs, replace the battery with an Alkaline type (Eveready Energizer #522, Duracell #MN1604), or Lithium type (ULTRALIFE U9VL-J), from your local retailer. Use the convenient QUICK DRAW<sup>®</sup> pull-out battery drawer for easy battery replacement.

Slide the QUICK DRAW<sup>®</sup> pull-out battery drawer open and remove the battery. While observing polarity, push the replacement battery into the battery drawer until it is held securely in place. Carefully close the QUICK DRAW<sup>®</sup> pull-out battery drawer.

## **▲WARNING!**

**Use only the batteries specified. Use of different batteries may have a detrimental effect on the alarm. The constant exposures to high or low temperatures or high humidity may reduce battery life.**

## **▲CAUTION!**

**When battery door is open, the battery will not power the alarm even if the battery is properly installed. If AC power for the alarm is disconnected, interrupted or not present for any reason, the battery backup will not power the alarm and your protection will be removed.**

## **▲CAUTION!**

**Do not attempt to repair this combination alarm. Doing so will void your warranty.**

### **REPAIRS AND SERVICES**

The smoke alarm contains less than 1 microcurie (37 kilobecquerel) of Americium 241, a radioactive material. **The distribution of these ionization type smoke alarms is licensed by the U.S. Nuclear Regulatory Commission; the consumer is exempt from any licensing or requirements.** If the smoke alarm is defective in any way, do not tamper with the unit. Return the unit for servicing. (See warranty for instructions or in-warranty returns.) There will be a service charge for repairing out of warranty units.

#### **NATIONAL FIRE PROTECTION ASSOCIATION REQUIRED PROTECTION**

For your information, the National Fire Protection Association's Standard 72, reads as follows:

"11.5.1 One- and Two-Family Dwelling Units. 11.5.1.1 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.

"A.11.8.3 Are More Smoke Detectors Desirable? The required number of smoke detectors might 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 the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required smoke detectors. The installation of smoke detectors in kitchens, attics (finished or unfinished), or garages is not normally recommended, as these locations occasionally experience conditions that can result in improper operation."

The equipment should be installed using wiring methods in accordance with the National Fire Protection Association's Standard 72, Chapter 11. (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269).

**THIS PRODUCT IS LISTED TO UL STANDARD FOR SAFETY,  
UL217 AND UL2034, BY UNDERWRITERS LABORATORIES**

## USI FIVE YEAR LIMITED WARRANTY

**USI ELECTRIC, INC. ("USI") warrants your USI product to be free from defects in material and workmanship for a period of five (5) years from the date of purchase.** This warranty applies only to the original consumer purchaser and only to products used in normal residential use and service. If this product is found to be defective, USI's only obligation, and your exclusive remedy, is the repair or replacement of the product, at USI's discretion, provided that the product has not been damaged through misuse, abuse, accident, modifications, alteration, neglect or mishandling. This Warranty shall not apply to any product which is found to have been improperly installed, set-up, or used in any way not in accordance with the instructions supplied with the product. This warranty shall not apply to any batteries used in the product or to any damage which may be caused by such batteries. For replacement of the alarm under the terms of this Warranty, contact our Customer Service line at 1-800-390-4321, Ext. 238, for current postage and handling fees.

**USI DOES NOT WARRANT AND SPECIFICALLY DISCLAIMS ANY WARRANTY, WHETHER EXPRESS OR IMPLIED, OF FITNESS FOR A PARTICULAR PURPOSE, OTHER THAN THE WARRANTY CONTAINED HEREIN. NO IMPLIED WARRANTY ON THIS PRODUCT, CREATED BY STATE LAW, SHALL EXTEND BEYOND THE TERM OF THIS WARRANTY UNLESS SUCH LAW OTHERWISE PROVIDES. USI SPECIFICALLY DISCLAIMS ANY LIABILITY AND SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL LOSS OR DAMAGE, INCLUDING, BUT NOT LIMITED TO, DAMAGES TO ANY EQUIPMENT WITH WHICH THIS PRODUCT IS USED.**

Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitations or exclusions may not apply to you.

No agent, representative, dealer, or employee of the company has the authority to increase or alter the obligations or terms of this Warranty.

This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

This Warranty is only valid for merchandise purchased from outlets in the United States and Canada. This warranty expires upon end-of-service life signal.

Visit Us on the Web! [www.UsiElectric.com](http://www.UsiElectric.com)

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