FIREX®

Carbon Monoxide Alarm

110-1124

SERIES 12000 IONIZATION SMOKE / CARBON MONOXIDE ALARM

MODEL FADCM: 120 V AC WITH 9V BATTERY BACK-UP

MODEL FADCM-B: DC ONLY WITH 9V BATTERY

MODEL GCM: 120 V AC ONLY

PLEASE READ AND SAVE THIS ENTIRE MANUAL
Installer: Please leave this manual with the product

Electrical rating Models FADCM and GCM:
120V AC, 60Hz, 0.06amp
Model FADCM includes 9V battery back-up
Model FADCM-B includes 9V battery
Single or multiple station Smoke/CO alarm

The following symbols identify the most important safety messages in this manual.	
⚠ **DANGER**	When you see this symbol, be aware that if the message is ignored, the hazard WILL result in SEVERE bodily injury or death.
⚠ **WARNING**	When you see this symbol, be aware that if the message is ignored, the hazard CAN cause SEVERE bodily injury or death.
⚠ **CAUTION**	When you see this symbol, be aware that if the message is ignored, the hazard CAN or WILL cause MINOR bodily injury.

About this Smoke/Carbon Monoxide Alarm:

This combination Smoke/CO alarm is designed to detect smoke and carbon monoxide gas. It is NOT designed to detect fire or any other type of gas. **If this Smoke/CO alarm sounds its alarm horn, DO NOT assume that it is a false alarm. The alarm horn requires your immediate action**.

⚠ WARNING

Individuals with medical problems may consider using warning devices which provide audible and visual signals for carbon monoxide concentrations under 30ppm.

SPECIFICATIONS AND IMPORTANT PRODUCT INFORMATION
Product Features

- **Monthly Self-Test:** Approximately every 30 days this alarm performs a silent internal system test to verify sensor operation utilizing **True Gas Testing**. **True Gas Testing** verifies that the CO sensor is nearing the end of its service life. Traditional CO alarms test the sensor by simulating an alarm condition electrically. This is the first CO sensor that runs a diagnostic test by generating a very small and harmless amount of hydrogen gas. If the sensor is working properly, it WILL NOT chirp. If the alarm chirps during the monthly self-testing, it is indicating a problem with the unit. Refer to the charts on pages 6 and 7 for the appropriate actions to take should this occur. **You must still test the alarm weekly to verify proper horn operation.**

- **Trigger Alarm Locator™ (TAL™):** Most interconnect tests trigger all alarm horns simultaneously for the duration of the test. This unique system alternates between a 10 second ALL ON cycle and a 50 second cycle where only the initiating alarm is sounding.

- **Alarm Controlled Interconnect Test:** In an interconnected system, this feature will alarm the local unit first, then quiet the local unit while the remote units alarm.

- **Smart Quiet™ Low Battery 1:** Allows the homeowners to silence the low battery chirp for up to 10 hours, giving them time to go back to sleep and/or purchase a fresh replacement battery.

- **Smart Quiet™ Low Battery 2:** Indicates the battery no longer has enough voltage to adequately protect in the event of a power outage or a battery-only installation. The Smart Quiet™ feature will no longer silence the chirp. THE BATTERY MUST BE REPLACED IMMEDIATELY.

Required Power Supply

- Model FADCM requires constant 120-volt, AC power AND/OR a working 9-volt battery to operate properly. The alarms WILL NOT work if AC power is not connected or has failed or been interrupted for any reason (AND in the case of FADCM and FADCM-B, the battery is removed, drained or improperly connected). DO NOT use any other kind of battery except as specified in this manual.

- Model GCM requires constant 120-volt AC power to operate properly.

- You may operate Models FADCM and FADCM-B on battery power only. Having only one source of power is less reliable than having two different power sources. If the battery is too weak to power the alarm, or is removed from the alarm, the alarm will not protect you from hazardous conditions within your home. Make sure a battery-only installation complies with your local codes and regulations. Check with your local fire department or building code enforcement department if you are unsure of rules. **NOTE:** AC/DC alarms offer added protection in the event of a power failure or a drained battery.

AGENCY ALARM PLACEMENT RECOMMENDATIONS

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, as stated in Standard 72, Chapter 2, 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."

Chapter 2 also reads as follows:

"2-2.2.1 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."

"2.5.2.1 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."

This equipment should be installed in accordance with the National Fire Protection Association's Standard 72, NFPA, Batterymarch Park, Quincy, MA 02269.
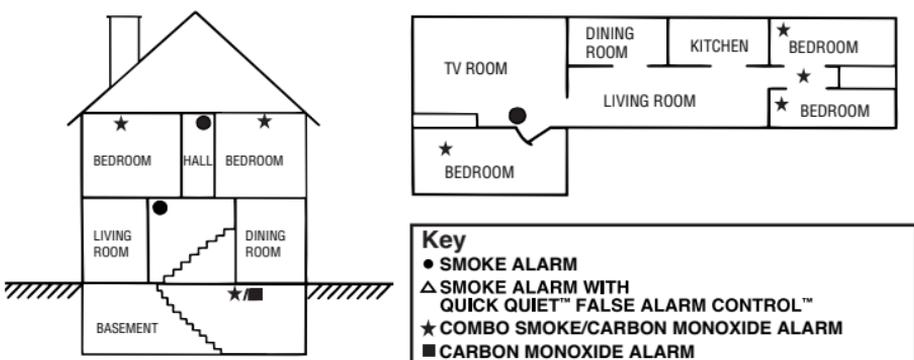
THIS STANDARD MEANS YOU SHOULD INSTALL AND USE A SMOKE ALARM IN EVERY ROOM AND AREA OF YOUR HOUSEHOLD OR BUILDING FOR BEST PROTECTION.

The NFPA, 1993 Edition, Appendix A further states:

"The required number of smoke detectors 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 house holder 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."

Also, as required by the California State Fire Marshal:

"Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows: a smoke 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.

Key
- ● SMOKE ALARM
- △ SMOKE ALARM WITH QUICK QUIET™ FALSE ALARM CONTROL™
- ★ COMBO SMOKE/CARBON MONOXIDE ALARM
- ■ CARBON MONOXIDE ALARM

For best protection, install a smoke alarm in EVERY room. In addition, we recommend that all smoke alarms be interconnected.
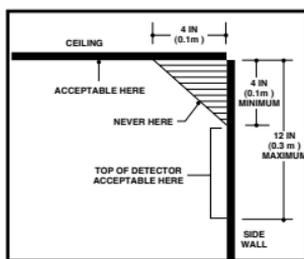

Different Types of Smoke Alarms

Ionization alarms are generally more effective at detecting fast, flaming fires that consume combustible materials rapidly and spread quickly. Sources of these fires may include flammable liquids or paper burning in a waste container. Photoelectric alarms are generally more effective at detecting slow, smoldering fires that smolder for hours before bursting into flame. Sources of these fires may include cigaretts burning in couches or bedding. **However, both types of alarms provide adequate detection of both types of fires.**

If you desire the earliest detction of both smoldering fires and fast flaming fires, you should install smoke alarms that combine both photoelectric and ionization sensing technologies in one unit.

Important Smoke Alarm Placement and Exception Information

- 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, install smoke alarms on walls, between 4 and 12 inches from ceiling/wall intersections.

- Install a minimum of two smoke alarms in every home, no matter how small the home. New construction codes require a minimum of two interconnected smoke alarms in newly built homes.

- 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 attics or attics which house electrical equipment like furnaces, air conditioners, or heaters.

For Optimal Performance, Avoid Installing Smoke Alarms in the Following Locations:

- Near appliances or areas where normal combustion regularly occurs (kitchens, near furnaces, hot water heaters). Use specialized smoke alarms with Quick Quiet™ False Alarm Control™ alarm control for these areas.
- In areas with high humidity, (bathrooms or areas near dishwashers or washing machines) install at least 10 feet (3 meters) away from these areas, if possible.
- Near air returns or within 3 feet (1 meter) of heating and cooling supply vents. 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.
- Within 3 feet (1 meter) of fluorescent lighting. Electrical noise may cause nuisance alarms.

About Locating CO Alarms

Carbon monoxide gas can be anywhere and everywhere. CO gas is equal to or slightly lighter than air, and disperses evenly with the air in a room. Therefore, install this CO alarm where air circulation is best. Since most CO fatalities occur while families are sleeping, we recommend that you install at least one CO alarm in the hallway outside each separate sleeping area and one inside each bedroom or sleeping area.

We also recommend that you install a CO alarm on every separate living level of the home where household members frequently spend time, as well as in the basement.

This CO alarm can share the interconnect wire of smoke and heat alarms, BUT this alarm will remain silent if smoke or high heat is detected by the interconnected smoke and heat alarms. Therefore it is necessary to install both a CO alarm and smoke alarm or a smoke/CO combination alarm in those areas to be fully protected.

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

⚠ WARNING
DO NOT install Smoke/CO alarms:

- Near bathrooms or in shower areas. Steam and aerosol sprays can disable the alarm.
- In closets, crawlspaces, unused attics, or unheated areas where surrounding air temperatures man go below 40°F (4.4°C) or above 100°F (37.8°C).
- Within five feet of any fuel-burning appliance (stove, kerosene heater, furnace, fireplace, etc.).
- Within one foot of any wall, corner, or other dead air space.
- In rooms where chemicals or cleaning supplies are frequently used (paint, hair spray, thinner, etc.). Allow plenty of ventilation in rooms where chemicals are used.
- Directly above a sink, bathtub or basin.
- Directly above or below air exchange or heating vents.
- Behind drapes, furniture, or appliances that could block air flow to the alarm.

⚠ WARNING
This unit cannot be used in recreational vehicle applications.

Limitations of This Smoke/CO Alarm

- Smoke and CO alarms may not alert every household member every time. The alarm horn is loud in order to alert individuals to a potential danger. However, there may be limiting circumstances where a household member may not hear the alarm (e.g. out-door or indoor noise, sound sleepers, drug or alcohol usage, the hard of hearing, etc.). If you suspect that this alarm may not alert a household member, install and maintain specialty smoke alarms. Household members must hear the alarm's warning sound and quickly respond to it to reduce the risk of damage, injury, or death that may result from fire. If a household member is hard of hearing, install special alarms with lights or vibrating devices to alert occupants.
- Smoke alarms can only sound their alarms when they detect smoke. Smoke alarms detect combustion particles in the air. They do not sense heat, flame, or gas. This alarm is designed to give audible warning of a developing fire. However, many fires are fast-burning, explosive, or intentional. Others are caused by carelessness or safety hazards. Smoke may not reach the smoke alarm QUICKLY ENOUGH to ensure safe escape.
- 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.
- CO alarms can only sound their alarms when they detect CO gas. They do not sense heat, flame, or any gas other than carbon monoxide (CO). This alarm is designed to give audible warning that a dangerously high level of CO is present. You must respond immediately to the CO alarm horn.
- Smoke and CO alarms have limitations. This alarm is not foolproof and is not warranted to protect lives or property from fire. Smoke and CO alarms are not a substitute for insurance. Homeowners and renters should insure their lives and property. In addition, it is possible for the alarm to fail at any time. For this reason, you must test the alarm weekly and replace every 5 years.

Under Normal Operation

- DO NOT remove or disconnect the battery or turn off AC power to quiet unwanted alarms. This will remove your protection. This alarm features a Quick Quiet™ False Alarm Control™ button which, when activated, will quiet unwanted smoke or CO alarms for up to 6 minutes.

Installation/Interconnect

- **It is important to note that this smoke/CO combination alarm IS NOT compatible with models FADCQ and COQ8. If more than one model FADCQ, or more than one model COQ8, is in your home, all must be replaced in order to achieve a fully operational interconnected system. If models FADCQ and COQ8 are interconnected with this combination alarm, they will operate as if they were single station stand-alone alarms, thus eliminating the benefits and additional protection of an interconnected system.**
  Models FADCQ and COQ8 are still compatible with all existing Firex AC and AC/DC smoke alarms.
- This Smoke/CO alarm should be installed only by a licensed qualified electrician. Observe and follow all local and national electrical and building codes for installation.
- Unique power connector prevents interconnection with incompatible smoke and combination alarms or security systems.
- This combination alarm may be interconnected with as many as 11 other Firex model COE, COEA, FADCM, FADCM-B, GCM, FADC, TPCI, AD, ADC, PAD, FPAD, G, GC, or PG40 smoke alarms, and as many as 6 Firex model ADH heat alarms and/or CO alarms for a total of not more than 18 interconnected devices.

- You may use the multiple station interconnected features of your combination alarm even if powered only by a battery. We recommend that you check with your local code enforcement bureau before mixing interconnected alarm devices that may be normally operating both with and without AC power.

- This alarm can share the interconnect wire of 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.

⚠ WARNING

- **DO NOT connect this Smoke/CO alarm to any other type of smoke, CO, heat, or combination alarm or auxiliary device except those listed in this manual.**

- **WHILE AC AND AC/DC SMOKE, CO AND HEAT ALARMS CAN BE INTERCON-NECTED, ONLY WHEN AC POWER IS ACTIVE WILL ALL UNITS ALARM WHEN ONE UNIT SENSES A HAZARDOUS CONDITION. WHEN AC POWER IS DIS-CONNECTED, INTERRUPTED OR NOT PRESENT FOR ANY REASON, ONLY AC/DC UNITS WILL CONTINUE TO SEND AND RECEIVE SIGNALS AND SOUND AN ALARM IN RESPONSE TO THE PRESENCE OF SMOKE. WHEN POWER IS DISCONNECTED, INTERRUPTED OR NOT PRESENT FOR ANY REASON, AC POWERED SMOKE, CO, OR HEAT ALARMS WILL NOT OPERATE!**

Compliance and Proper Applications

- This Smoke/CO alarm is designed to be used inside a single-family household. In multi-family buildings, each individual living unit should have its own alarms. It is not a substitute for a complete commercial alarm system. It should be used only as **supplemental** protection in hotels, motels, dormitories, hospitals, nursing homes, or group homes.

- 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.

NOTE: Enclosed with this Smoke/CO alarm are two labels detailing actions to take in the event of an alarm. One should be placed next to the Smoke/CO alarm; the other should be placed near a source of fresh air. Please provide the telephone number of the emergency provider and a qualified technician on each label.

HOW TO INSTALL THIS SMOKE/CO ALARM

This alarm can be mounted and operated in one of three ways: 1. Battery (DC) Only Stand Alone, **2.** AC With a Junction Box, and 3**.** Interconnected AC Only and AC/DC Alarms.

Installing a Battery (DC) Only Stand-Alone Alarm Model FADCM -B

⚠ CAUTION
Do not use super glue or silicon caulk on or near the alarm! Fumes from these products can coat and permanently damage the sensor.

1. Remove the mounting plate. Hold the alarm and turn the mounting plate clockwise to separate it from the back of the alarm.

2. Hold the mounting plate against the ceiling or wall in the desired position and use a pencil to trace the inside of the mounting slots.

3. Use a 3/16" (5mm) drill bit to drill through the center of the outlines you made in Step 2.

4. Insert screw anchors into the drilled holes. If necessary, gently tap anchors with a hammer until they are flush with the mounting surface.

5. Attach the mounting plate to the mounting surface with the mounting screws provided.

6. position the combination smoke and CO on the mounting plate and turn clockwise to lock it into place.

7. **Pull out the battery activation strip.** The alarm will respond with one yellow light flash.

8. Test the alarm. See "TESTING AND MAINTENANCE" for details.

Installing With a Junction Box Models FADCM and GCM

⚠ CAUTION
Do not use super glue or silicon caulk on or near the alarm! Fumes from these products can coat and permanently damage the sensor.
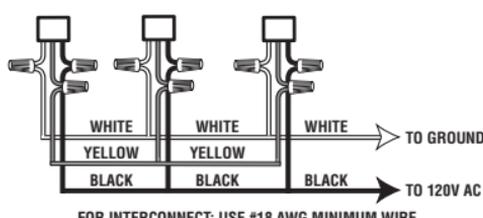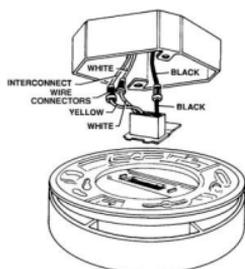
⚠ DANGER
ELECTRICAL SHOCK HAZARD. Turn off power at the main fuse box or circuit breaker by removing the fuse or switching the circuit breaker to the OFF position.

⚠ WARNING
This Smoke/CO alarm should be installed only by a qualified electrician. Carbon Monoxide alarm installation must be in accordance with the requirements of Article 760 of the National Electrical Code and any local codes that may apply.

Install alarm on any 4-inch octagon or single gang junction box only.

1. Remove the mounting plate. Hold the alarm and turn the mounting plate clockwise to separate it from the back of the alarm.

2. Align recessed slots on plate with mounting holes of any 4-inch octagon or single gang junction box.

3. Gently pull household wires through center hole of plate.

4. Secure plate to junction box using mounting screws.

5. With a wire connector, connect white wire from connector plug to white (neutral) household wire.

6. Connect black wire from connector plug to black (120V AC) household wire.

7. **To interconnect alarms,** connect yellow wire from connector to interconnect wire between other combination or smoke alarms.

FOR INTERCONNECT: USE #18 AWG MINIMUM WIRE

4

8. **Model FADCM AC/DC alarm only: Activate the battery.** Remove arrow tab and close battery door. The yellow light will flash as door is closed.

Interconnecting AC Only and AC/DC Alarms Models FADCM and GCM

⚠ CAUTION

Do not use super glue or silicon caulk on or near the alarm! Fumes from these products can coat and permanently damage the sensor.

⚠ 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/CO alarm should be installed only by a qualified electrician. Carbon Monoxide alarm installation must be in accordance with the requirements of Article 760 of the National Electrical Code and any local codes that may apply.

- Use #18 AWG minimum solid or stranded wire. When interconnecting, maximum wire length between any two is 1,500 feet for #18 AWG or 4,000 feet for #14 AWG (20 OHMS loop resistance).

- This combination alarm may be interconnected with as many as 11 other Firex model COE, COEA, FADCM, FADCM-B, GCM, FADC, TPCI, AD, ADC, PAD, FPAD, G, GC, or PG40 smoke alarms, and as many as 6 Firex model ADH heat alarms and/or CO alarms for a total of not more than 18 interconnected devices.

- **It is important to note that this smoke/CO combination alarm IS NOT compatible with models FADCQ and COQ8. If more than one model FADCQ, or more than one model COQ8, is in your home, all must be replaced in order to achieve a fully operational interconnected system. If models FADCQ and COQ8 are interconnected with this combination alarm, they will operate as if they were single station stand-alone alarms, thus eliminating the benefits and additional protection of an interconnected system.**
  Models FADCQ and COQ8 are still compatible with all existing Firex AC and AC/DC smoke alarms.

- You may use the multiple station interconnected features of your FADCM even if powered only by a battery. We recommend that you check with your local code enforcement bureau before mixing interconnected alarm devices that may be normally operating both with and without AC power.

- This alarm can share the interconnect wire of 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..

⚠ WARNING

WHILE AC AND AC/DC SMOKE, CO AND HEAT ALARMS CAN BE INTERCONNECTED, ONLY WHEN AC POWER IS ACTIVE WILL ALL UNITS ALARM WHEN ONE UNIT SENSES A HAZARDOUS CONDITION. WHEN AC POWER IS DISCONNECTED, INTERRUPTED OR NOT PRESENT FOR ANY REASON, ONLY AC/DC UNITS WILL CONTINUE TO SEND AND RECEIVE SIGNALS AND SOUND AN ALARM IN RESPONSE TO THE PRESENCE OF SMOKE, CO, OR HEAT, AS DETERMINED BY THE MODEL OF ALARM THAT IS PRESENT. WHEN POWER IS DISCONNECTED, INTERRUPTED OR NOT PRESENT FOR ANY REASON, AC POWERED SMOKE, CO, OR HEAT ALARMS WILL NOT OPERATE.

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

- Connect CO and smoke alarms to a single dedicated AC branch circuit. If local codes do not permit such a wiring configuration or connection, be sure the neutral wire is common to both circuits or phases.

Installing AC/DC Smoke/CO Alarms as Replacements with Interconnected Legacy Firex Alarms

Model FADCM and GCM combination alarms are designed to be used as replacement units for most Firex AC and AC/DC smoke alarms with a low voltage interconnect line. These models include G, GC, H, AD, ADC, and FADC. All models listed use a 3-wire interconnect system. To interconnect with other Firex models, please call our free technical support line at (800) 445-8299.

IMPORTANT! READ BEFORE INSTALLING THIS SMOKE/CO ALARM WITH EXISTING INTERCONNECTED FIREX ALARMS

In residential homes, there are two ways smoke and Smoke/CO alarms are hardwire installed and interconnected. One uses 4 wires, the other uses 3 wires. The model FADCM and GCM alarms can be used with both 4 and 3 wire systems.

1. Identify whether the installed system uses 3 or 4 wires to interconnect.

2. If a 4-wire system is installed, change the system to a 3-wire by connecting the independent interconnect wires (yellow and blue) at any point in the system.

3. Smoke alarms generally don't require any changes (other than replacement every ten years).

4. Replace older Smoke/CO alarms on the new 3-wire system with FADCM and GCM Smoke/CO alarms. These alarms can discriminate between signals coming from a smoke alarm and signals coming from a CO alarm. Older model Smoke/CO alarms converted to 3-wire cannot. So when any alarm is triggered, all the older CO alarms will sound, creating confusion about which danger is actually present.

To Install a Combination Unit as a Replacement:

1. Turn off AC power at circuit breaker or main fuse box.

2. Remove old alarm from mounting bracket.

3. Disconnect wire connector from back of unit.

4. Remove wire nuts and connect new wire connector to household wiring. Be certain not to cross the wiring.

5. Connect wire connector to back of alarm.

6. If mounting bracket is the same, reattach alarm to mounting bracket. Feed wiring back through hole in mounting surface.

7. Turn on power at main fuse box or circuit breaker.

8. Test Smoke/CO alarm. See "TESTING THE SMOKE/CO ALARM."

9. **Model FADCM AC/DC model only: Activate the battery.** Remove arrow tab and close battery yellow light will flash as door is closed.

IF THE ALARM SOUNDS

If Your Smoke Alarm Sounds (and you are not testing it)

⚠ WARNING

IF BOTH RED LIGHTS ARE FLASHING AND THE HORN SOUNDS 3 ALARMS APPROXIMATELY EVERY FOUR SECONDS, IT INDICATES THE PRESENCE OF SMOKE WHICH CAN INDICATE THE PRESENCE OF FIRE.

YOU MUST QUICKLY DO THE FOLLOWING:

1. Don't panic; stay calm.
2. Leave the building as quickly as possible. Touch doors with the back of your hand to feel if they are hot before opening them. **IF DOOR IS HOT USE AN ALTERNATE EXIT**. Crawl along the floor, and DO NOT stop to collect anything.
3. Meet at a pre-arranged meeting place outside the building.
4. Call the fire department from OUTSIDE the building.
5. **DO NOT GO BACK INSIDE A BURNING BUILDING.**

If Your CO Alarm Sounds (and you are not testing it)

Carbon Monoxide has no taste, feel or smell – but it can be FATAL.

⚠ WARNING

IF 1 RED LIGHT IS FLASHING AND THE HORN SOUNDS 4 ALARMS APPROXI-MATELY EVERY FIVE SECONDS, IT INDICATES THE PRESENCE OF CO WHICH CAN BE FATAL. YOU MUST QUICKLY DO THE FOLLOWING:

1. Operate Test/Reset button;
2. Call your emergency services [fire department or 911]
3. Immediately move to fresh air — outdoors or by an open door/window. Make certain that all persons are accounted for. Do not reenter the premises or 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 (_____) to investigate sources of CO from fuel burning equipment and appliances, and to 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 manufacturers 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.
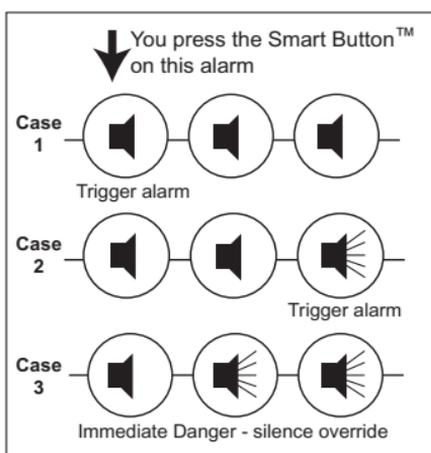
If the CO alarm sounds its alarm horn again, it has sensed CO. This is not a false alarm.

TO TEMPORARILY SILENCE AN ALARM

NOTE: *These features temporarily quiet alarms, but do not disable the sensor.*

When you push the Smart Button during an alarm, one of three things will happen:

1. **All interconnected alarms are silenced.** This means you pushed the button on the unit that actually triggered alarm. *(Quick Quiet" False Alarm Contro l ")*
2. **One unit still sounding an alarm; the rest are silenced.** The unit that triggered alarm continues to sound so you can identify the remote source of the alarm. *(Smart Quiet" Trigger Alarm Locator)*
3. **The unit whose Smart Button you pressed is still sounding an alarm; the rest are silenced.** This indicates an immediate danger. Smoke or CO is intense enough to override the silence option.

You press the Smart Button™ on this alarm

Case 1 — Trigger alarm

Case 2 — Trigger alarm

Case 3 — Immediate Danger - silence override

Quick Quiet™ CO Reset
Smart Quiet™ Trigger Alarm Locator

These features help you identify the trigger alarm(s) and areas of immediate danger to avoid under alarm conditions. After one minute if a dangerous condition persists all units will go back into alarm: all alarms will sound for 10 seconds, then just the initiating alarm will sound for 50 seconds. **This 10-second/50-second alarm pattern will keep repeating until the air is cleared and the immediate danger has passed. MOVE AWAY from areas where you hear trigger alarms sounding if at all possible. DO NOT IGNORE the trigger alarm(s),** and be aware that an extremely dangerous situation exists at that location(s) in your home.

Latching LED Alarm Indicator

The Latching LED Alarm Indicator activates automatically, and helps you identify the original trigger alarm(s) in an interconnected series after a smoke or CO event.

Smoke Alarm - after a smoke alarm condition, the two RED lights on the triggering alarm(s) blink 3 times every 10 seconds until manually reset.

CO Alarm - after a CO alarm condition, the single RED light on the triggering alarm(s) blinks 3 times every 10 seconds until manually reset.

Smart Quiet™ for Low Battery Alert

You can silence the Low Battery Alert for up to 10 hours by pressing and releasing the Smart Button. The sensor remains active. This allows you and your family to go back to sleep or gives you time to purchase a replacement battery. It is important that you replace the battery as soon as possible to continue your protection!

CONDITION	HORN
AC power is present	
Standby condition	
Push-to-Test (Local Test Only)	
Press-and-Hold (Local and Interconnect Tests)	
Smart Quiet™ Low-Battery #1	Horn beeps once per minute
Smart Quiet™ Low-Battery #2	Horn beeps once per minute
Fault condition	Horn sounds two quick beeps every minute
Local smoke is detected	Horn sounds 3 long tones, then pauses, every 4 seconds.
Initiating smoke alarm is latched	
Quick Quiet™ False Alarm Control™ is activated	
Local CO condition is detected	Horn sounds 4 short tone patterns every 5 seconds
Local CO condition is latched	
Quick Quiet™ CO Reset is activated	
Remote signal is received from another smoke or heat alarm	Horn sounds 3 long tones, the pauses, every 4 seconds
Remote signal is received from another CO alarm	Horn sounds 4 short tone patterns every 5 seconds

TROUBLESHOOTING

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

PROBLEM	SOLUTION
GREEN light is not on.	1. Alarm may be functioning properly on DC (battery) power if YELLOW light flashes once per minute. 2. Check AC power supply at fuse box or breaker panel. 3. Alarm wiring is improperly connected. Have wiring checked by a licensed electrician. Retest the alarm.
Alarm does not sound and lights do not flash when unit(s) is tested. **NOTE:** Push and hold Smart Button for at least 5 to 10 seconds if unit does not sound!	1. Check that AC power is turned on (GREEN light ON); check that a good battery is inserted correctly in the battery compartment; check that the battery door is tightly closed. 2. Turn off power. Remove alarm from mounting plate and check that connector plug is securely attached. 3. Clean alarm (see "Cleaning" on page 9).
Interconnected smoke, heat, or CO alarms do not sound when Smart Button is pushed to test units.	1. Press and hold the Smart Button longer until the second set of two quick beeps sounds to initiate the remote test. 2. Check that remote alarms are receiving power and functioning properly 3. Alarm interconnect circuit problem. Replace and retest. 4. On DC (battery powered) interconnected alarms, remove alarm from mounting bracket and check that the connector plug is securely attached. 5. On an interconnected series with both AC and AC/DC powered units, wiring may have been improperly connected. Have wiring checked by a licensed electrician. Retest all alarms in the series.
Interconnected CO alarms sound with smoke alarms when Smart Button is pushed to test units.	Indicates older CO alarms, without Smart Interconnect, are sharing the same interconnect line and cannot distinguish between alarm signals for smoke or CO. Replace with model COE, COEA or FADCM alarms.

LED AND HORN PATTERNS

LIGHTS	SMART BUTTON KEY
GREEN light ON	
YELLOW light blinks once per minute.	Quick push activates a local Push-to-Test sequence.
YELLOW light blinks during horn ramp-up. RED blinks 4 times right after horn sounds.	Press and RELEASE button before you hear the third chirp. The system will perform a single local test cycle.
YELLOW light blinks during horn ramp-up. RED blinks 4 times right after horn sounds.	Press and HOLD button. The system will perform a single local test cycle, then repeat the interconnect test until you release the button.
YELLOW light flashes 2 times per minute after horn beeps.	Quick press will eliminate the low-battery warning for about 10 hours.
YELLOW light flashes 3 times per minute after horn beeps.	Smart Button WILL NOT silence the low battery chirp! Replace battery immediately!
YELLOW light flashes constantly after horn beeps.	Press to check the alarm again. Replace alarm if it remains in the fault condition.
Both RED lights flash with horn.	Quick press activates False Alarm Control™.
Both RED lights flash 3 times every 10 seconds.	
Both RED lights flash 1 time every 10 seconds.	
RED light flashes 4 times right after horn.	Quick press activates CO Reset.
RED light flashes 3 times every 10 seconds.	Quick press erases the CO latched signal.
RED light flashes 1 time every 10 seconds.	
	Quick press activates Smart Quiet™ Trigger Alarm locator for smoke and heat alarms.
	Quick press activates Smart Quiet™ Trigger Alarm locator for Model FADCM and GCM alarms.

THE SMOKE/CO ALARM

⚠ **WARNING** **DO NOT disconnect the battery or AC power to quiet an unwanted alarm. This will remove your protection.
Use Quick Quiet™ False Alarm Control™ by pushing the Smart Button.**

PROBLEM	SOLUTION
The horn beeps once, then two beeps, then three beeps, pauses, and then sounds the full alarm when using the Smart Button to test.	The alarm is operating properly. The Firex patented Horn Ramp-Up feature lets you start the test sequence and move away from the unit before the full alarm horn sounds.
Alarm sounds; no hazard present.	Take Emergency Safety Actions in all alarm situations! If no hazard proves to be present: Test the alarm to check for proper functioning. Clean the alarm. (See TESTING AND MAINTENANCE.) Check that the alarm is placed properly. (See AGENCY RECOMMENDATIONS FOR ALARM PLACEMENT.)
The alarm beeps once a minute and YELLOW light flashes.	The battery needs to be replaced. Turn off power and replace the battery. (See "REPLACING THE BATTERY" in "TESTING AND MAINTENANCE".) Push the Smart Button to temporarily quiet the low battery signal for 10 hours.
Horn beeps twice a minute and YELLOW light flashes.	Push the Smart Button to allow alarm to reset and self test. If fault signal continues, alarm is no longer providing protection and must be replaced.

For Technical Support:
PH: (800) 445-8299
Email: technical service@invensys.com
Website: www.icca.invensys.com/firex

REPLACE OR RETURN THE ALARM IF THE PUSH-TO-TEST FUNCTION DOES NOT OPERATE PROPERLY AFTER FOLLOWING THE PROCEDURES OUTLINED ABOVE (see **Where to send your alarm for service** on page 10).

IMPORTANT SAFETY INFORMATION

Fire Safety Tips

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.

• Develop family escape plans, discuss them with ALL household members, and practice them regularly. The plans should include TWO exits from each room, an escape route to the outside from each exit, and a safe meeting place for everyone outside the building.

• Familiarize everyone with the sound of a smoke alarm and explain what it means.

• Teach all household members **NOT TO OPEN ANY DOOR IF THE DOOR IS HOT,** and to crawl along the floor to stay below dangerous smoke, fumes, and gases.

CO Home Safety Tips

CO poisoning is often caused by equipment failures due to poor maintenance, product defects, and damaged parts. The following tips can help prevent CO within your home:

1. Have all fuel-burning appliances inspected and cleaned yearly by a qualified service technician. The furnace, water heater, and stove are some of the leading sources of CO.

2. Clean fireplace vents and chimney regularly. A blocked chimney could cause a backdraft of CO into the home. Do not seal chimney. This will cause a backdraft of CO into the home.

3. Do not seal a draft hood or exhaust vent to any appliance. This will trap dangerous CO inside the house.

4. Do not close off or confine your fuel-burning appliances in a closed area. They need plenty of ventilation to operate properly.

5. Do not use liquid propane (LP) or charcoal grills or operate any gasoline powered equipment indoors.

6. Allow for plenty of ventilation when using a kerosene heater. Do not use in small areas.

Preventive maintenance, common sense, and a CO detection device are some of the best methods of preventing CO poisoning. However, a dangerous situation can happen to anyone at any time.

The following list illustrates some danger signs of CO presence.

1. Soot and dirt build-up seeping out of chimney or other exhaust vents.

2. A mostly yellow (rather than clear blue) burner flame or pilot flame in gas appliances.

3. A draft of air coming from an appliance, chimney, or vents.

4. Car idling in an open or closed attached garage, or near a home.

If you have flu-like symptoms or suspect CO poisoning, seek medical assistance immediately!

Symptoms of Carbon Monoxide Poisoning

CO poisoning has many symptoms. Some are very similar to the flu, the effects of intoxication, or drug usage. In many CO cases, people feel ill and stay home to rest. This only compounds the CO poisoning because they stay in the home where CO is present.

As CO levels rise, the symptoms become more extreme. At low levels people will suffer headaches and mild nausea. At higher levels unconsciousness, heart failure, and even death can occur. 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).
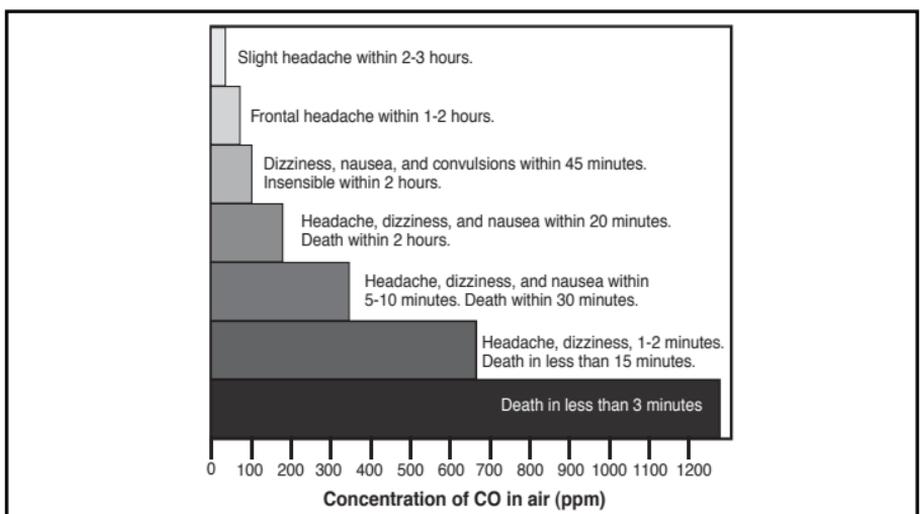
Medium Exposure: Severe throbbing headache, drowsiness, confusion, fast heart rate.

Extreme Exposure: Unconsciousness, convulsions, cardio-respiratory failure, death.

Many cases of reported carbon monoxide poisoning indicate that while victims are aware they are not well, they become so disoriented they are unable to save themselves by either exiting the building or calling for assistance. Also, young children, the elderly, and household pets may be the first affected by CO poisoning.

The important factor with any CO poisoning, however, is time. At high levels, CO can cause death in just minutes. At lower levels, it could take from hours to days of constant CO exposure to have the same life-threatening effect.

The chart below illustrates the symptoms of CO poisoning by concentration of CO and its effect over time.

Slight headache within 2-3 hours.

Frontal headache within 1-2 hours.

Dizziness, nausea, and convulsions within 45 minutes. Insensible within 2 hours.

Headache, dizziness, and nausea within 20 minutes. Death within 2 hours.

Headache, dizziness, and nausea within 5-10 minutes. Death within 30 minutes.

Headache, dizziness, 1-2 minutes. Death in less than 15 minutes.

Death in less than 3 minutes

Concentration of CO in air (ppm)
0 100 200 300 400 500 600 700 800 900 1000 1100 1200

Conditions That Can Cause CO Levels to Change.

The following conditions can result in transient CO situations in the home.

1. Excessive spillage or reverse venting of fuel burning appliances caused by outdoor ambient conditions, such as:

   a. Wind direction and/or velocity, including high gusts of wind. Heavy air in the vent pipes (cold/humid air with extended periods between cycles).

   b. Negative pressure differential resulting from the use of exhaust fans.

   c. Simultaneous operation of several fuel burning appliances competing for limited internal air.

   d. Vent pipe connections vibrating loose from clothes dryers, furnaces, or water heaters.

   e. Obstruction in the vent pipe or unconventional vent pipe designs which can amplify the above situations.

2. Extended operation of unvented fuel burning devices (range, oven, fireplace, etc.).

3. Temperature inversions which can trap exhaust gasses near the ground.

4. Car idling in an open or closed attached garage, or near a home.

TESTING AND MAINTENANCE

Testing

- **Stand-alone units:** Test each alarm regularly to be sure it is operating properly.
- **Interconnected units:** Test each alarm in an interconnected system regularly.
- The Smart Button accurately tests all functions. DO NOT use an open flame to test this Smoke/CO alarm. You may ignite and damage the smoke alarm or your home.
- Test alarms weekly and upon returning from vacation or when no one has been in the household for several days.

REPLACE OR RETURN THE ALARM IF THE PUSH-TO-TEST FUNCTION DOES NOT OPERATE PROPERLY AFTER FOLLOWING THE PROCEDURES OUTLINED ABOVE (see **Where to send your alarm for service** on page 10).

IMPORTANT! Refer to "Understanding the Alarm LEDs and Horn Patterns" chart so you understand how to tell if your alarm is operating properly.

Maintenance and Care

⚠ 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/CO alarm or replacing the battery.

Cleaning

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

Clean the cover at least once a month using the soft brush or wand attachment to a vacuum cleaner. Be sure all the vents are free of debris. If necessary, use a damp cloth to clean residual dirt. Do not use abrasive cleansers or spray the alarm with cleaning agents or waxes, especially cleaners containing ammonia. These liquids may impair the performance of sensors. Do not submerge the alarm in water.

Replacing the Battery (Model FADCM and FADCM-B)

Replace the battery at least once a year or immediately when the low battery warning activates. If a replacement battery is not immediately available, push the Smart Button to silence the Low Battery Warning for approximately 10 hours. If alarm does not silence, replace the battery immediately. Use only the batteries specified below. All are available at your local retailer.

⚠ WARNING

Use only Eveready 522, Duracell MN 1604 or MX 1604, or Ultralife U9VL-J batteries! DO NOT USE ANY OTHER TYPE OF BATTERY. DO NOT USE RECHARGEABLE BATTERIES. Refer to the Installation section if you are not familiar with the proper way to install a new battery.

WARRANTY INFORMATION
5-YEAR LIMITED SMOKE/CO ALARM WARRANTY

Invensys Controls Americas warrants to the original consumer purchaser each new Smoke/CO alarm to be free from defects in material and workmanship under normal use and service for a period of five (5) years from the date of purchase. Invensys Controls Americas agrees to repair or replace, at its option, any defective Smoke/CO alarm provided 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 THE DATE OF PURCHASE FOR THE SMOKE/CO ALARM. 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. This product meets all the requirements of U.L. Standard 2034.

Where to send your alarm for service

Not attempt to repair this combination alarm. Doing so will void your warranty. If the alarm is not operating properly, see "Troubleshooting." If you must return an alarm under warranty, send the alarm in a well-padded envelope with postage prepaid, a note describing the nature of the difficulty, and proof of date of purchase to:

In U.S.:

Invensys Controls Americas
28C Leigh Fisher Blvd.
El Paso Texas 79906
United States of America

In Canada:

Invensys Controls Americas
Service de réparation
3505 Laird Road - Unit #14
Mississauga Ontario L5L 5Y7

If the Smoke/CO alarm is no longer under warranty, have a licensed electrician replace the Smoke/CO alarm immediately with a comparable Firex brand alarm.

For Technical Support:
Phone: (800) 445-8299
Email: technicalservice@invensys.com
Website: www.icca.invensys.com/firex

invensys

Controls Americas
191 E. North Avenue
Carol Stream Illinois 60188
©2005 Invensys Controls Americas   110-1124