ITI Part No. 60-848-95, 60-849-95

ESL Smoke Sensor Model 562

Document Number: 466-xxxx Rev. A
PRELIMINARY
April 2000

Installation Instructions

Product Summary

The ESL Smoke Sensor Model 562 (smoke alarm) is a Learn Mode, wireless, photoelectric smoke sensor with a self-contained alarm siren, a low-battery annunciator, and a status light. The smoke alarm is part of a security/fire alarm system and communicates with the system control panel.

Each smoke alarm uses two 3-volt lithium batteries. The batteries are shipped with the unit.

Figure 1.Mounting Bracket.

Installation Guidelines

❏ This equipment should be installed in accordance with the National Fire Protection Association's Standard 72 (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269).

❏ Avoid installing the unit until all construction is completed. The mounting ring may be pre-installed.

CAUTION
Not compatible with CareTaker *Plus* and custom versions with software versions 3.0 or earlier.
Not compatible with Commander 2000 and custom versions with software versions 4.0 or earlier.

Equipment Needed

❏ Phillips screwdriver.
❏ Pocket-sized slotted screwdriver.

Programming

This section describes the basic steps for adding the sensor to panel memory. For more detailed programming information, refer to the specific panel installation instructions.
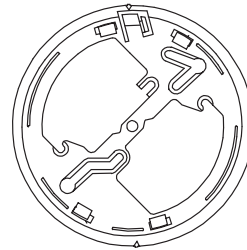
To add the smoke alarm to panel memory:

1. Remove smoke unit from mounting bracket.
2. Put the panel in Program Mode/Learn Sensors.
3. Select a sensor group and sensor number.
4. Remove mounting bracket.
5. Press and hold the test button.
6. The panel will indicate that the sensor has been learned.
7. Exit from program mode.

Note
Reinstall smoke unit on mounting bracket.

Mounting Guidelines

Determine the best mounting location for the smoke alarm using the following guidelines:

❏ NFPA 72, Chapter 2, Section 2-2.1.1.1 states as follows: "Smoke alarms 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 alarm also shall be installed in each sleeping room."

❏ NFPA 72, Appendix A, Section A-2.5.2.1 states as follows: "Smoke Detection - Are More Smoke Alarms Desirable? The required number of smoke alarms might not provide reliable early warning protection for those areas separated by a door from the areas of the house protected by the required smoke alarms. For this reason, it is recommended that the household consider the use of additional smoke alarms for those areas of increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, util-

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ity roo, and hallways not protected by the required smoke alarms. The installation of smoke alarms 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 above NFPA standards are a minimum requirement for smoke sensor installation. For better protection, we also require the installation of a smoke sensor inside every bedroom in existing construction.

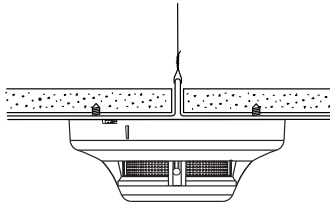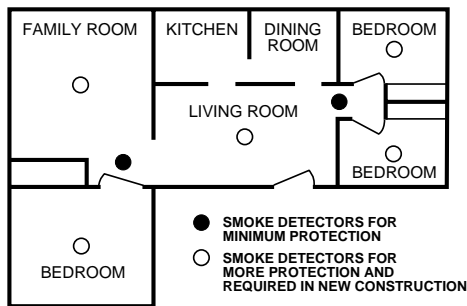❏ DO NOT mount a smoke alarm to a drop ceiling tile; mount it to a metal runner (see figure 2).

Figure 2. Smoke alarm mounted to drop ceiling.

❏ Mount all smoke alarms within 100 feet of the panel.
❏ Install a minimum of two smoke alarms in any household, no matter how small it is.
❏ Put a smoke alarm in the hallway outside of every bedroom area. A minimum of two smoke alarms are required in homes with two bedroom areas (see figure 3).

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Figure 3. Residence with multiple sleeping areas

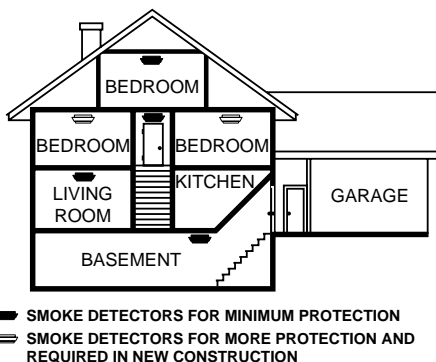❏ Put a smoke alarm on every level of a multi-level residence (see figure 4).

Figure 4. Multi-level residence

❏ Install basement alarms on the ceiling at the bottom of the basement stairwell.
❏ Install smoke alarms on the ceiling as close to the center of the room as possible. If this is not practical, install it on the ceiling no closer than 4 inches (10 cm) from any wall or corner (see figure 5).
❏ If ceiling mounting is not practical, install on an inside wall between 4 and 6 inches (10 and 15 cm) from the ceiling (see figure 5).
❏ Put smoke alarms at both ends of a bedroom hallway if the hallway is more than 30 feet (9 meters) long. Large rooms over 900 square feet require more than a single sensor.
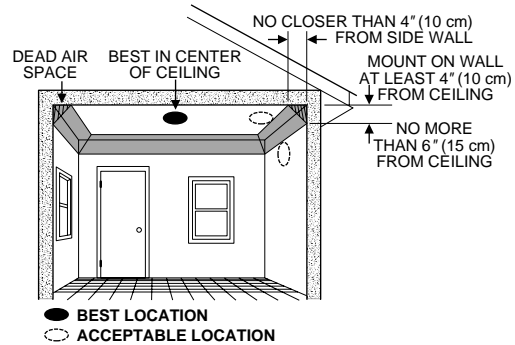

Figure 5. Smoke alarm mounting locations

❏ Areas with rough ceilings or short, transom-type walls coming down from the ceiling require additional smoke alarms.
❏ Install second-floor smoke alarms on the ceiling at the top of the first-to-second floor stairwell. Be sure no door or other obstruction blocks the path of smoke to the unit.
❏ In rooms with sloped, peaked, or gabled ceilings, install smoke alarms 3 feet (0.9 meter) measured down on the slant from the highest point of the ceiling (see figure 6).
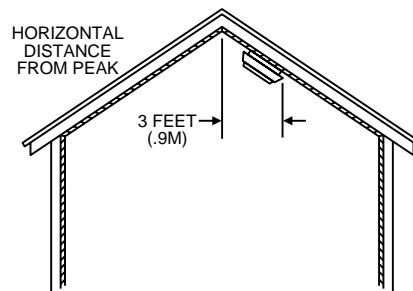

Figure 6. Sloped, peaked, or gabled ceilings

Limitations

All alarms are subject to possible compromise or failure-to-warn for a variety of reasons, for example:

❏ Smoke alarms cannot detect smoke in chimneys, walls, roofs, or smoke blocked by a closed door.
❏ Alarms may not detect smoke on other levels of the building.

❑ Alarms may not warn in time when fires are caused by smoking in bed, explosions, improper storage of flammables, overloaded electrical circuits, or other hazardous conditions.

Do Not Install Smoke Alarms in the Following Locations:

❑ In or near areas where combustion particles are normally present such as kitchens; in garages where there are particles of combustion in vehicle exhausts; near furnaces, hot water heaters, or gas space heaters.
❑ On the ceiling in rooms next to kitchens where there is no transom between the kitchen and these rooms.
❑ In damp or very humid areas, or next to bathrooms with showers. Install sensors at least 5 feet (1.5 meters) away from bathrooms.
❑ In very cold or very hot areas.
❑ In dusty, dirty, or insect-infested areas.
❑ Near fresh air inlets or returns or excessively drafty areas. Air conditioners, heaters, fans, and fresh air intakes and returns can drive smoke away from smoke alarms.
❑ In dead air spaces at the top of a peaked ceiling or wall/ceiling intersect. Dead air may prevent smoke from reaching a smoke alarm.
❑ Near fluorescent light fixtures. Install smoke alarms at least 10 feet (3 meters) away from fluorescent light fixtures.

Mounting

The mounting bracket must be separated from the unit before you begin.

To mount the smoke alarm:

1. Secure the mounting bracket directly onto wood surfaces using No. 8, 1½ inch wood screws. If mounting onto plaster or dry wall, use appropriate anchors.
2. Align the arrows on the mounting bracket with the raised marks on the smoke alarm. Turn the smoke alarm clockwise until it locks in place.

Testing

Test each smoke alarm every week to verify that its siren and signal integrity are adequate. Refer to the specific panel installation instructions for system response.

To test the smoke alarm:

1. Put the panel in sensor test mode. Although not necessary for this model, it is a good practice to maintain. Refer to the specific panel installation instructions for details.
   ❑ Simon and Advent panels must be in sensor test. If not, you will not see anything at the panel.

⚠ **WARNING**
Commander and Caretaker panels will go into alarm if not in sensor test when the test button is pressed.

2. Press and hold the test button on the smoke alarm for 3 to 4 seconds.

Figure 7. Smoke Alarm Test Switch and Indicator Light.

The sensor should immediately transmit an alarm signal, causing the siren inside the smoke alarm to sound and the status light to flash rapidly. Refer to the panel's installation instructions for response details.

Note
After verifying that the siren and signal integrity are adequate, you may want to cover the center opening with your thumb. This will help reduce the siren noise until the test is completed.

Maintaining the System

Replacing Batteries

When the batteries need to be replaced, the unit transmits a signal to the panel. If the batteries are not replaced within 7 days, the unit will chirp every 40 seconds until the batteries are exhausted.

Note
If you test the smoke alarm or it goes into alarm during this 7-day period, chirp delay is canceled and the unit begins chirping immediately.

Constant exposure to high or low temperatures or high humidity may reduce battery life. Replace *both* batteries when the smoke alarm or panel notifies you that the batteries are low.

Note
For UL installations, use the following battery brands: Sanyo CR123A, Panasonic CR123A, or Duracell DL123A. These can be obtained through Interactive Technologies, Inc. Do not mix brands.

Cleaning

Clean the smoke alarm chamber at least once each year.

Figure 8. Smoke Alarm diagram

To clean the smoke alarm chamber:

1. Place the panel in sensor test mode.
2. Remove smoke alarm from mounting ring.
3. Remove the batteries.
4. Separate housing from base.
5. Remove screen and chamber housing.
6. Vacuum screen, chamber housing, and chamber.

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7. Reassemble smoke alarm.
8. Re-install the batteries.
9. Attach smoke alarm to mounting ring.
10. Test operation as describe in the "Testing" section.

Servicing

In the event that the smoke alarm needs servicing, send it to: Interactive Technologies, Inc., 2266 Second St. North, North St Paul, MN 55109.

Emergencies

Develop plans for a variety of emergency situations. Periodically discuss and rehearse emergency plans that includ the following:

❑ Know the normal stat of doors and windows; open, closed, or locked.

❑ Use a different escape rout if closed doors feel hot to the touch.

❑ Emphasize that everyone should escape as quickly as possible. Do not stop to gather any belongings.

❑ Crawl and hold your breath as much as possible to help reduce smoke inhalation during your escape.

❑ Meet at a designated outdoor location.

❑ Emphasize that no one should return to the premises if there is a fire.

❑ Notify fire department from a neighbor's phone.

⚠ **WARNING**
If you arrive at the premises and hear sirens, do not attemp to enter the building. Call for emergency assistance from a neighbor's phone.

Floor Plan Example

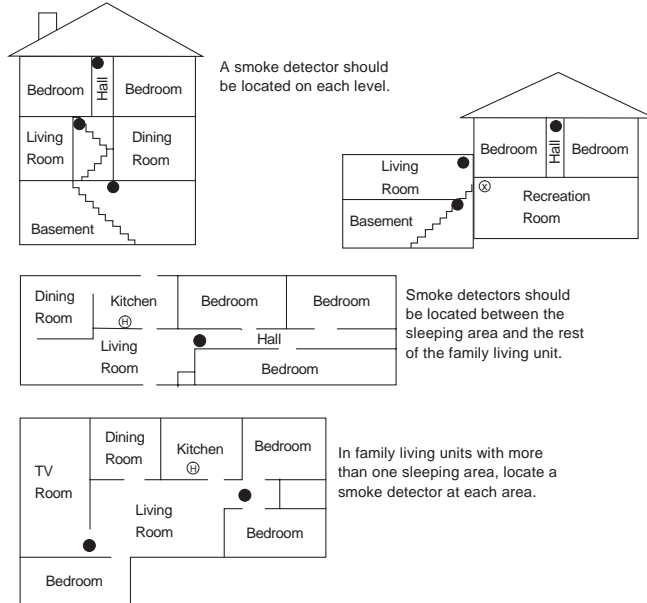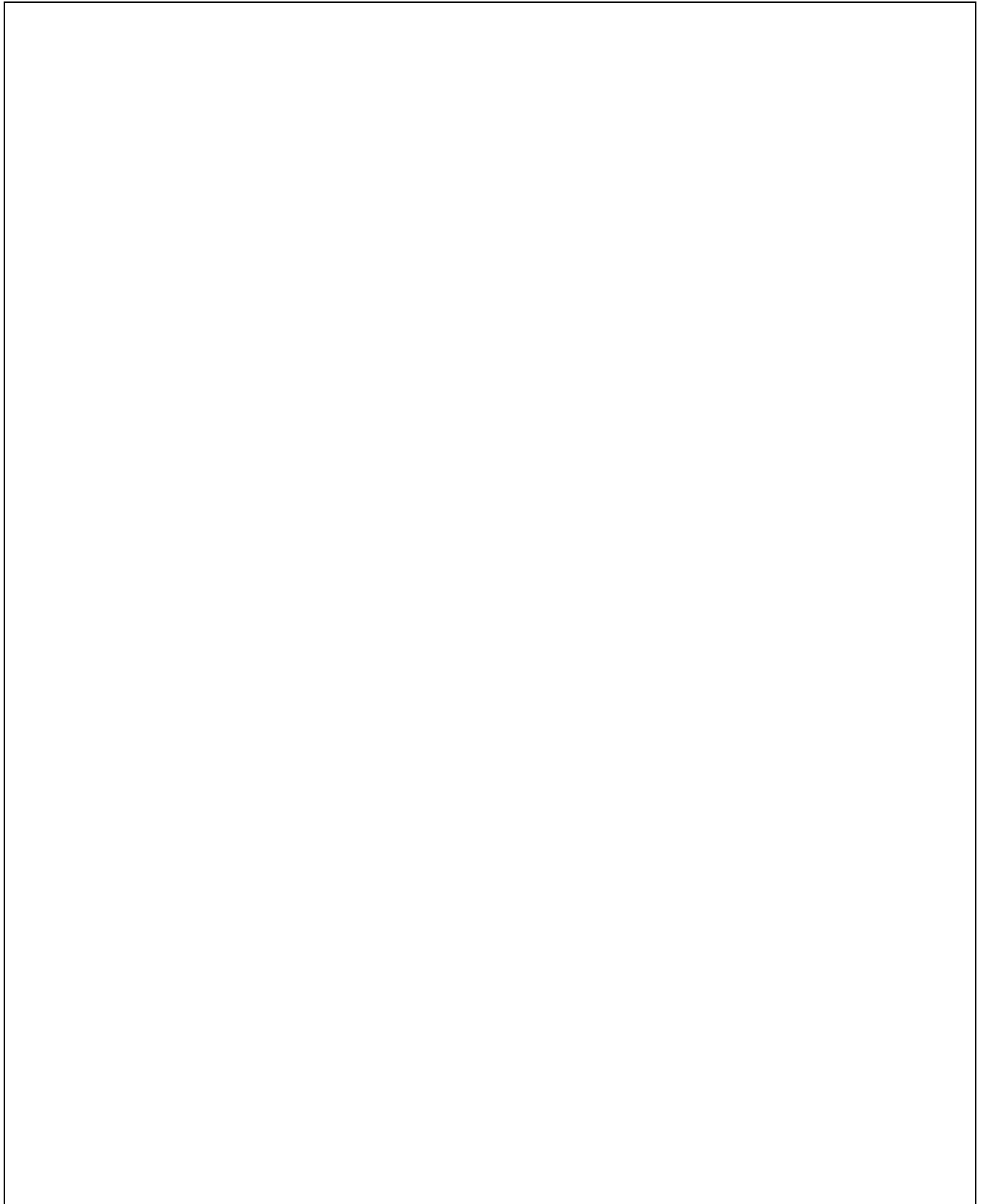Figure 9 is an example of a multilevel floor plan. Use it as a guide and draw your floor plan on the next page.

Figure 9. Example of a floor plan.

Your Floor Plan

When establishing your excape routes, consider the following guidelines:

❑ Show all building levels.

❑ Show all exits, (two exits per room are recommended).

❑ Show the location of all components of the fire system.

❑ Show the locations of any fire extinguishers, hoses, ladders, etc.

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Specifications

Compatibility:	Advent, Commander 2000 and Custom Versions with software versions 4.1 and later UltraGard, and Custom Versions, Concord, Concord Express, Simon
Dimensions:	2.25 × 5.0″ (without mounting bracket) 2.25 × 5.5″ (with mounting bracket)
Temperature Range:	32° to 100°F
Humidity:	70% non-condensing
Power Source:	Two 3-volt lithium batteries of the same type. UL-approved types: Sanyo CR123A, Panasonic CR123A, Duracell DL123A.

Notices

Agency Listings: UL 217 (60-848-95)—Residential Installations
UL 268 (60-849-95)—Commercial Installations

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Interactive Technologies, Inc. can void the user's authority to operate the equipment.

FCC Registration No.: B4Z-773A-SMOKE

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