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GEM-SMK-E SUPERVISED DIGITAL WIRELESS SMOKE DETECTOR INSTALLATION INSTRUCTIONS

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Out of concern for the environment, NAPCO has reduced the size of its printed manuals while still providing the required agency paper documentation. A soft copy (PDF) of this document is available for download from our Technical Library at the following URL or the equivalent QR code, at left:

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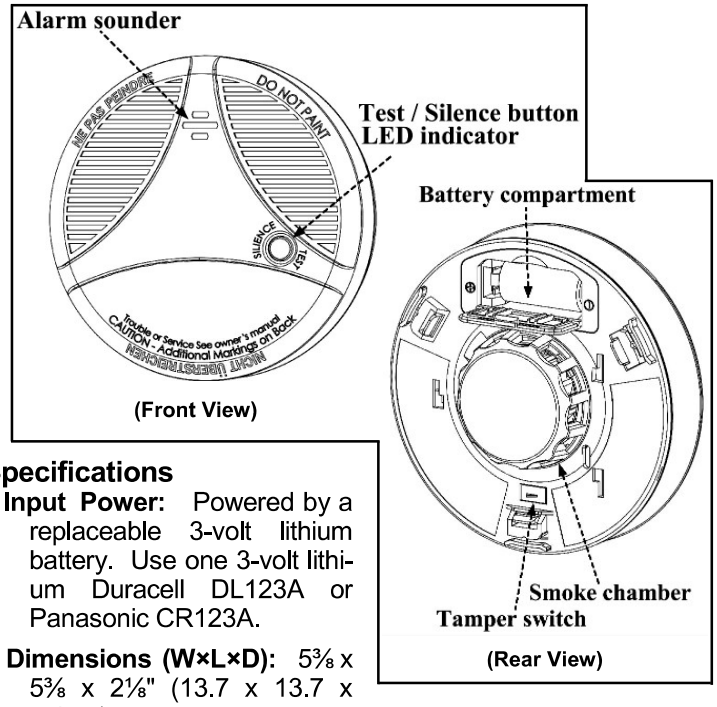
The **GEM-SMK-E** Photoelectric Smoke Detector is effective for detecting smoke in your premises. It is compatible with NAPCO's **GEM-RECV** and **GEMC-RECV** series supervised receivers that monitor alarms, restores, low battery, tamper, and status. See control panel installation instructions for compatibility. Features include easy installation, continuous monitoring for smoke, TEST button, 85dB sounder, continuous self-diagnostic testing, 10 year life for detector (approximate 3 year battery life; reports low battery to assist with maintenance). Other features include:

- **Smoke Alarm --** The alarm pattern is three (3) short alarm beeps with three (3) corresponding red LED flashes, repeats until the smoke event is eliminated.
- **Silence Feature --** The Silence feature can temporarily quiet the siren for several minutes, but the LED still flashes according to the corresponding alarm. Silence the Smoke alarm by pressing the **Test/Silence** button on the detector. The Smoke alarm will silence for up to 8 minutes. After 8 minutes, if the smoke is not cleared, the siren will sound again.
- **Test Feature --** Press the **Test/Silence** button to test the Smoke detector after the installation is complete, then test again at least monthly to ensure correct operation. Upon pressing the **Test/Silence** button, the detector will perform two different test alarm patterns. The test alarm pattern is three (3) short alarm beeps with three (3) corresponding red LED flashes. **Note:** Pressing the **Test/Silence** button causes an alarm to be sent to the central station (call central station to suspend reporting during test periods). It is suggested that the detector be tested at least annually or as required by the AHJ with UL Classified Test Gas/Spray such as HSI Fire Smoke Check Model 25S. Remember to notify the Central Station of the test prior to starting.
- **Smoke Clean Me Warning --** Two (2) beeps with two (2) corresponding yellow LED flashes every 50 seconds (indicates the unit should be cleaned; refer to **General Maintenance**).
- **Smoke Low Sensitivity Warning --** Two (2) beeps with one (1) corresponding yellow LED flash every 50 seconds. This pattern indicates the unit needs to be replaced.
- **Hush Feature --** The hush feature can temporarily quiet the siren for one hour, and the LED still flashes according to the corresponding warning signal. You can silent/restore any warning signal by pressing the **Test/Silence** button.
- **End of Product Life Warning --** When the detector reaches its end of life, the unit will sound one (1) beep with four (4) corresponding flashes of the yellow LED light every fifty (50) seconds. This indicates that the detector must be replaced immediately.
- **Tamper Alarm --** When the detector is removed from its Mounting Bracket, the tamper switch opens, sounding the tamper alarm (tamper switch location is shown above). The tamper alarm pattern is two (2) long alarm beeps and two (2) corresponding yellow LED flashes. **WARNING:** For 5 minutes after the unit is powered (e.g. after a battery installation / change), a tamper warning will not sound and the transmitter will not send a tamper signal to the supervised receiver. After this initial 5 minutes the tamper warning will sound and will be active thereafter.
- **Low Battery Warning --** When the batteries are low and need to be replaced, the detector will beep, and the yellow LED light will flash once every 50 seconds. This warning should last for up to 30 days but be sure to replace the battery as soon as possible before battery power is completely drained. Replace with Panasonic CR123A or Duracell DL123A 3V lithium battery. **Note:** The Low battery warning cannot be silenced.
- **Smoke Trouble Warning --** The Smoke trouble pattern is three (3) beeps with one (1) corresponding yellow LED flash every 50 seconds. This pattern indicates the unit must be replaced.

Product Views



Specifications

Input Power: Powered by a replaceable 3-volt lithium battery. Use one 3-volt lithium Duracell DL123A or Panasonic CR123A.

Dimensions (W×L×D): 5⅜ x 5⅜ x 2⅛" (13.7 x 13.7 x 5.4cm)

Operating Environment
Temperature: 40°F to 100°F (4.4°C to 37.8°C)

Regulatory Information
Rating: This detector has been evaluated by ETL and con-

forms to UL Standard 268 the Standard for Smoke Detectors.

Environmental Class: Indoor, in accordance with the Operating Environment specifications.

Where the Smoke Detector May Not Be Effective

1. Fires where the victim is in direct contact with the flame; for example, when a person's clothes catch fire while cooking;
2. Fires where the smoke is prevented from reaching the smoke alarm due to a closed door or other obstruction;
3. Incendiary fires where the fire grows so rapidly that an occupant's egress is blocked even with properly located smoke alarms.

Locations to Install Your Detector

Smoke detectors should be installed in accordance with the NFPA Standard 72 (National Fire Protection Association, Batterymarch Park, Quincy, MA 02169). For complete coverage in residential units, smoke detectors should be installed in all rooms, halls, storage areas, basements, and attics in each family living unit. Minimum coverage is one detector on each floor and one in each sleeping area.

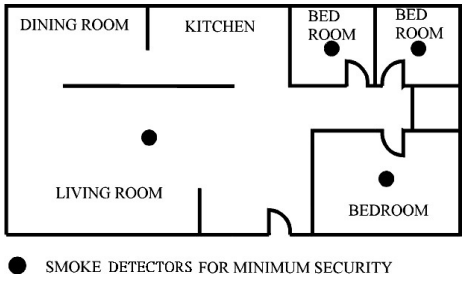


Fig. 1: One separate smoke detector in every bedroom and one on every floor as a minimum protection

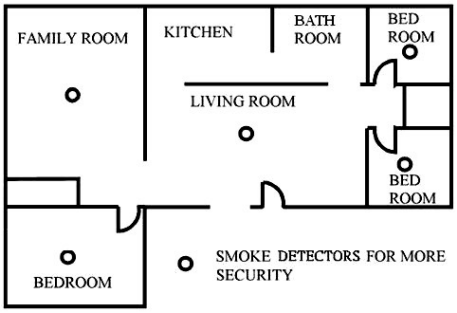


Fig. 2: One separate smoke detector in every room, except kitchen and bathroom for more security

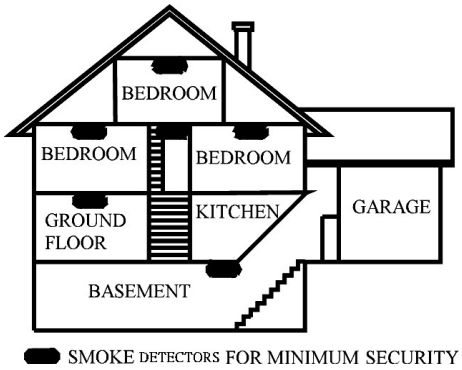


Fig. 3: Location for placing smoke detectors for a multi-floor residence.

Useful Tips

Install one separate smoke detector in every bedroom and one smoke detector in the floor as a minimum protection. Install one separate smoke detector in every room, except kitchen and bathroom for more security, as shown in **Fig. 1** and **2**.

- Install a smoke detector on every floor of a multi-floor home or apartment, as shown in **Fig. 3**.
- Install a smoke detector inside every bedroom.
- Install smoke detectors at both ends of a bedroom hallway if the hallway is more than 40 feet (12 meters) long.

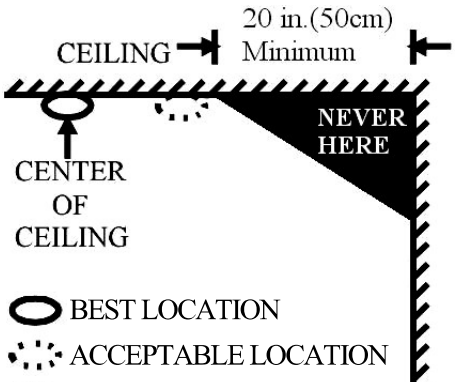


Fig. 4: Recommended best and acceptable locations to mount smoke detectors

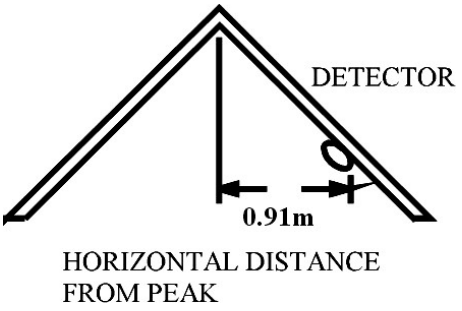


Fig. 5: Recommended location to mount smoke detectors in rooms with a sloped, gabled, or peaked ceiling

- Install detectors at the bottom of the basement stairwell.
- Install second-floor detectors at the top of the first-to-second floor stairwell. Be sure no door or other obstruction blocks the path of smoke to the detector.
- Install additional detectors in your living room, dining room, family room, attic, utility and storage rooms.
- Install smoke detectors as close to the center of the ceiling as possible. If this is not practical, put the detector on the ceiling, no closer than 20 inches (50 cm) from any wall or corner, as shown in **Fig. 4**.
- If some of your rooms have sloped, peaked, or gabled ceilings, try to mount detectors 36 inches (0.91 meters) measured horizontally from the highest point of the ceiling as shown **Fig. 5**.

CAUTION (As required by the California State Fire Marshall): *Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows: (1) A smoke detector installed in each separate sleeping area (in the vicinity, but outside of the bedrooms), and (2) 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.*

For your information, the National Fire Alarm and Signaling Code, NFPA 72, reads as follows:

*"29.5.1 *Required Detection."*

**29.5.1.1 Where required by applicable laws, codes, or standards for a specific type of occupancy, approved single- and multiple-station smoke alarms shall be installed as follows:*

1. **In all sleeping rooms and guest rooms*
2. **Outside of each separate dwelling unit sleeping area, within 21ft (6.4m) of any door to a sleeping room, the distance measured along a path of travel*
3. *On every level of a dwelling unit, including basements*
4. *On every level of a residential board and care occupancy (small facility), including basements and excluding crawl spaces and unfinished attics*
5. **In the living area(s) of a guest suite*
6. *In the living area(s) of a residential board and care occupancy*

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al Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.) (National Fire Alarm and Signaling Code® and NFPA 72® are registered trademarks of the National Fire Protection Association, Inc., Quincy, MA 02269.)

Locations NOT to Install Your Detector

Nuisance alarms occur when smoke detectors are installed in locations where they will not work properly. To avoid nuisance alarms, do not install detectors in the following situations:

- Combustion particles are the by-products of something burning, therefore do not install detectors in or near areas where combustion particles are present, e.g. kitchens with few windows or poor ventilation, garages where there may be vehicle exhaust, near furnaces, hot water heaters, and space heaters.
- Do not install detectors less than 20 feet (6 meters) away from places where combustion particles are normally present. If a 20-foot distance is not possible, e.g. in a mobile home, install the detector as far away from the combustion particles as possible. To prevent nuisance alarms, provide suitable ventilation in such places.
- When air streams pass by kitchens, the way a detector can sense combustion particles in normal air-flow pathways is graphically shown in **Fig. 6**, which indicates the correct and incorrect smoke detector locations for these conditions.

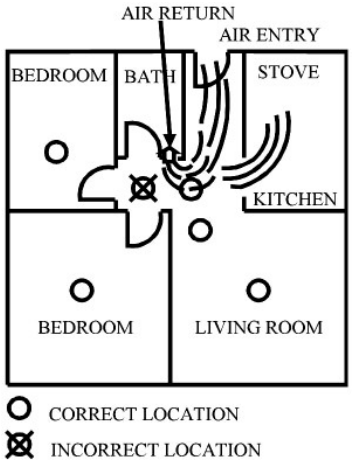

Fig. 6: Recommended smoke detector locations to avoid air streams with combustion particles

- In damp or humid areas or near bathrooms with showers. Moisture in humid air can enter the sensing chamber and turn into droplets upon cooling, causing nuisance alarms. Install detectors at least 10 feet (3 meters) away from bathrooms.
- In very cold or very hot areas, including unheated buildings or outdoor rooms. If the temperature goes above or below the operating range of smoke detector, it will not work properly. The temperature range for your smoke detector is 40°F to 100°F (4.4°C to 37.8°C).
- In dusty or dirty areas, dirt and dust can accumulate within the detector's sensing chamber, making it overly sensitive. In addition, dust or dirt can block openings to the sensing chamber and keep the detector from sensing smoke.
- Near fresh air vents or very drafty areas like air conditioners, heaters or fans, fresh air vents and drafts can drive smoke away from smoke detectors.
- Dead air spaces are often at the top of a peaked roof, or in the corners between ceilings and walls. Dead air may prevent smoke from reaching a detector. See **Fig. 4** and **5** for recommended mounting locations.
- In insect-infested areas. If insects enter a detector's sensing chamber, they may cause a nuisance alarm. Where insects are a problem, remove them before installing a detector.
- Near fluorescent lights, electrical "noise" from fluorescent lights may cause nuisance alarms. Install smoke detectors at least 5 feet (1.5 meters) from these types of lights.
- Your detector must not be used with smoke alarm guards.
- Do not locate within 5 feet (1.5m) of any cooking appliance.

Mounting Instructions

Read "Locations to Install Your Detector" and "Locations NOT to Install Your Detector" sections in these instructions first, then select an optimal mounting location.

To install your Smoke Detector:

1. At the mounting location, draw a horizontal line 6 in. (15cm).
2. Remove the mounting bracket from your detector by rotating it counterclockwise, shown in **Fig. 7**.

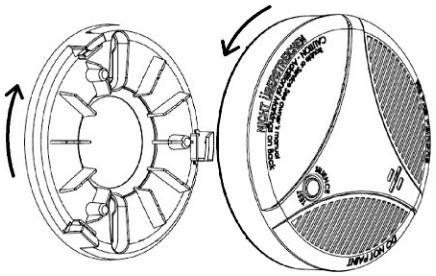

Fig. 7: Removing the Mounting Bracket

3. Place the mounting bracket so that the two longest hole-slots are aligned on the line. In each of keyhole slots, draw a mark to locate a mounting anchor and screw.
4. Remove the mounting bracket.
5. Using a 3/16-inch (5mm) drill bit, drills two holes at the marks and insert supplied plastic wall anchors (if needed). **Note:** Ensure the smoke detector is protected from dust particles created when drilling mounting holes.
6. Using the two supplied screws and plastic anchors, secure the mounting bracket in the selected location.

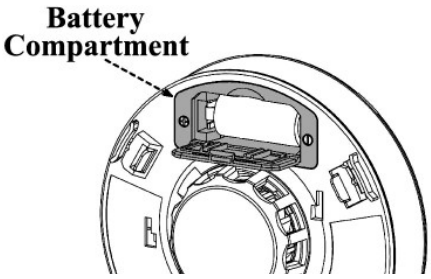

Fig. 8: Battery compartment location

7. Install batteries (see **Fig. 8**)
   - Open battery cover, install battery into compartment, observing polarity as indicated by embossed markings in plastic.
   - Press the **Test** button to verify detector operation.
8. Note the RF ID # for programming the wireless smoke detector into your connected alarm control panel.
9. Line up the slot in the mounting bracket with the slot in the Smoke detector. Push the Smoke detector onto the mounting bracket and turn it clockwise to secure. Gently pull the Smoke detector to ensure it is securely attached to the mounting bracket, shown in **Fig. 9**.

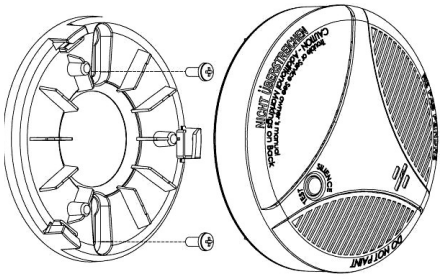

Fig. 9: Mounting the Mounting Bracket

10. Write the date of installation on the **Date of Install** label and paste it in a conspicuous location.

General Maintenance

Verify operation of the alarm siren, LEDs, and battery by pushing the **Test** button at least once a month. If the detector is set to report to the central station, temporarily suspend monitoring during the test otherwise an alarm will be reported. **Note:** The control panel siren will continue to sound until the arm/disarm code is entered at the control panel keypad. For Gemini GEM-Series and GEMC-Series control panel programming, refer to the instructions included with the control panel. When using PCD-Windows Quickloader software, ensure the correct zones are selected for "FIRE ZONE". In addition, always perform an error check before programming.

Remove the device from the mounting bracket and vacuum the detector cover and vents with a soft brush attachment monthly to remove dust and dirt. Reinstall immediately after cleaning and then test using the **Test** button.

Never attempt to disassemble the unit or clean inside of it as this will void your warranty. Never use detergents or solvents. When household cleaning supplies or similar contaminants are used, the area must be well ventilated. The following substances can damage the sensors and may cause false readings: Methane, propane, isobutene, isopropanol, ethyl acetate, hydrogen sulfide, sulfide dioxides, alcohol base products, paints, thinner, solvents, adhesives, hair spray, after shave, perfume, spraying the detector with insect sprays or other means to destroy insects, and some cleaning agents. Do not paint the detector, as paint will seal the vents and interfere with its ability to detect smoke. Move the detector prior to performing any of the following: Staining or stripping wood (e.g. floors or furniture), painting, wall papering or using adhesives. Store the detector in a plastic bag during any of the above activities to help protect the sensors from damage (be sure to reinstall the detector to assure continuous protection).

If Smoke Alarm Activates

Never ignore the sound of the alarm. Check for signs of fire or smoke throughout the premises. If a fire is discovered, follow the steps listed below. Familiarize yourself with these items and review them with all family members.

- Smoke alarms may not awaken all sleeping individuals, and that it is the responsibility of those 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. Leave immediately using one of your pre-planned escape routes. Every second matters. Do not delay by get dressed or collecting valuables.
- Before opening inside doors, look for smoke seeping in around the door edges. Feel the door with the back of your hand. If the door is hot, try to use another exit. If you feel it is safe, open the door very slowly but be prepared to close it should smoke rush in.
- If your escape route requires you to go through smoke, crawl low and under the smoke where the air is cleaner.
- Go to your predetermined meeting location. When two people have arrived, one should leave to call 911 from a neighbor's home. The other should stay to perform a head count.
- Do not reenter the premises under any circumstances until permitted by those in authority.

LIMITATIONS OF WIRELESS DEVICES

In planning the layout of the system, give careful consideration to the location of the Transmitter(s) and Receiver(s). Regardless of where the control panel is mounted, the receiver should be centrally located within the premises (whenever possible), that is, equally distant from all transmitters. Typical unobstructed range is up to 1000 ft.

Choose a location as high above ground level as practical (attic installations are not recommended due to temperatures exceeding the specification of the receiver), keeping in mind that metal objects may adversely affect reception. Also keep in mind construction materials in use that could affect wireless performance. Although wood and wallboard construction will have little effect upon signal strength at the receiver, concrete or brick can reduce signal strength by up to 35%, while steel-reinforced concrete or metal lath and plaster can reduce transmitter strength by as much as 90%. Where necessary additional receivers may be required.

See the receiver installation instructions for minimum signal strength for installation.

SUMMARY OF WARNING SIGNALS

Press/release the **Test/Silence** button to temporarily silence any warning signal. *(Normal operation = green LED flashes once every 50 seconds).*

- 3 beeps with 3 red LED flashes = **SMOKE ALARM**
- 2 beeps with 2 yellow LED flashes every 50 seconds = **SMOKE CLEAN ME**
- 2 beeps with 1 yellow LED flash every 50 seconds = **SMOKE LOW SENSITIVITY** (replace detector)
- 1 beep with 4 yellow LED flashes every fifty 50 seconds = **END OF PRODUCT LIFE**
- 2 long beeps with 2 yellow LED flashes = **TAMPER ALARM**
- 1 beep with 1 yellow LED flash every 50 seconds = **LOW BATTERY** (cannot be silenced)
- 3 beeps with 1 yellow LED flash every 50 seconds = **SMOKE TROUBLE** (replace detector)

Please read the **NAPCO Limited Warranty** in our Technical Library (https://tech.napcosecurity.com/) at the following link:
https://tech.napcosecurity.com/index.php/techlibrary/docdetails/brand_id/1/doc_id/3224

THE FOLLOWING STATEMENT IS REQUIRED BY THE FCC.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures: Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.