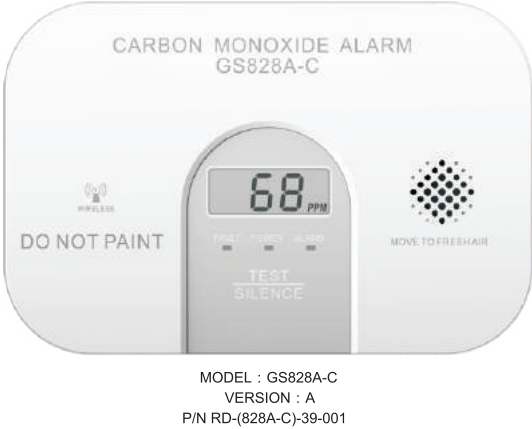


Carbon monoxide alarm



1. Installation instructions

1.1 Installation location

When choosing your installation locations, make sure you can hear the alarm from all sleeping areas. If you install only one CO alarm in your home, install the alarm near bedrooms. Not in the basement or furnace room. The recommended position for the unit should be at least 1.8 meters (about 6 feet) above the floor level. CAUTION: This alarm should be installed by a competent person.

1.2 Mounting type

Wall mounted  
1: Drilling two  $\phi$ 5.0mm holes in the wall, the distance between two holes center is 52mm, then inserting two plastic stopper provided into the holes. Figure1

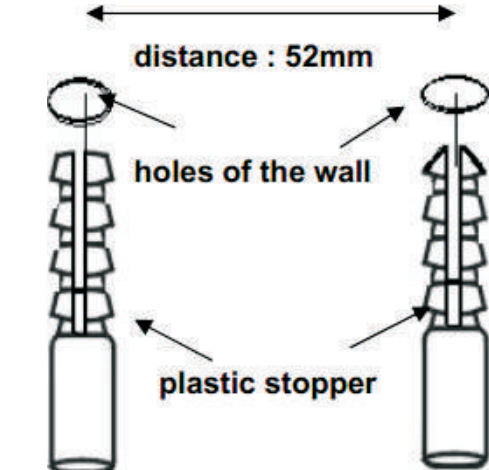


Figure 1.1

- 2: Insert the two screws provided until the screw heads are approximately 5mm from wall.
  - 3: Test the unit by using the TEST/SILENCE button. Ensure the unit sound is alarm pattern.
  - 4: Hook the unit over the screws onto keyholes in back of unit.
- Desktop placement
- 1: Remove the bracket from the assembly.
  - 2: Open battery compartment.
  - 3: Remove the isolator from the battery end.
  - 4: Cover the battery cover and mount the device on the bracket.
  - 5: Test the unit by using the TEST/SILENCE button. Ensure the unit sound is alarm pattern.
  - 6: Place the device on a flat desktop.

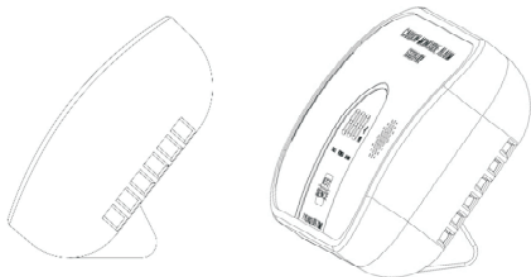


Figure 1.2

As you install the battery on the unit, maybe it will sound for several minutes, then stop and enter in normal operation mode. If it always sounds, please call our agent. NOTE: Only one Mounting type can be selected on delivery.

1.3 Recommended installation locations:

The following suggestions are intended to help you with the placement and installation of your CO alarm. The following suggestions are intended to help you with the placement and installation of your CO alarm.

- Place out of the reach of children. Under no circumstance should children be allowed to handle the CO alarm.
- Install in a bedroom or hallway located close to the sleeping area. Take special care to verify the alarm can be heard in sleeping areas.
- It is recommended that a CO alarm be installed on each level of a multilevel home.
- Do not install within 5 ft. of heating or cooking appliances. ( recommends 15 ft. to prevent nuisance alarms).
- Placing at eye level allows for optimum monitoring of the red and green indicator lights.
- Insure that all vents of the unit are unobstructed.
- Do not install in dead air spaces such as peaks of vaulted ceilings, or gabled roofs.
- Do not install in turbulent air from ceiling fans.
- Do not place near fresh air vents or close to doors and windows that open to the outside.
- Keep the CO alarm away from excessively dusty, dirty, or greasy areas such as kitchens, garages and furnace rooms. Dust, grease and household chemicals can affect the sensor.
- Keep out of damp and humid areas such as the bath room. Avoid spraying aerosols near the CO alarm.
- Do not install in areas where the temperature is below -10°C or hotter than 40°C.
- Do not place behind curtains or furniture. CO must be able to reach the sensor for the unit to accurately detect CO

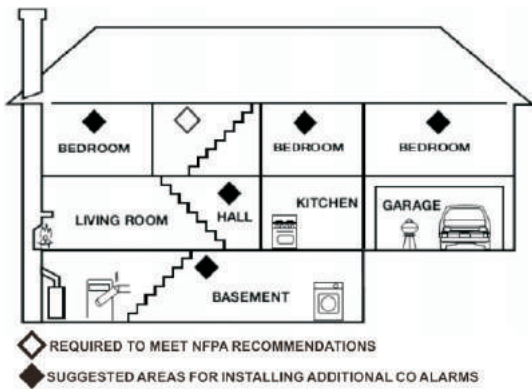


Figure 1.3

2. Product overview



2.1 POWER indicator

The POWER indicator (green LED) is used to indicate power status of the CO alarm. The POWER indicator will flash every 40 seconds.

2.2 FAULT indicator

The FAULT indicator (yellow LED) is used to indicate fault or warning status of the CO alarm.

2.3 ALARM indicator

The ALARM indicator (red LED) is used to indicate alarm status of the CO alarm.

2.4 TEST/SILENCE button

The TEST/SILENCE button is used to test the unit. Press and hold to enable TEST function.

2.5 Alarm sounder

The alarm sounder is used to send out CO alarm warning and fault warning information.

2.6 LCD screen

Indicates CO concentration and alarm status

3. Understanding your CO alarm

3.1 Start up

After connecting the battery, all three LEDs light up briefly and the CO alarm confirms start-up with a beep. Following, the green LED will blink once every second within 1 minute for startup status. During this period, The LCD will display for the first 5 seconds as figure 3.1 below and countdown from 55 to 0. After that, the unit turns into normal operation.



Figure 3.1

3.2 Normal operation

The POWER indicator (green LED) blink once every 40 seconds.

3.3 Fault warning

If the unit chirps twice every 40 seconds, with FAULT indicator (yellow LED) will flash. It indicates the CO alarm is malfunction condition. That means your CO alarm has no detecting function and no respond CO. The LCD will display as follow: Replace batteries, if condition continues, the CO alarm has malfunctioned. Replace immediately. Please contact us for more service.



Figure 3.3

3.4 Fault warning silence

When the alarm is under the Fault warning, press the TEST/SILENCE button, it will come into silence status for about 9 hours, and FAULT indicator (yellow LED) still keep flashing. The LCD will display for 5 seconds as Figure 3.4.1 , then will display as Figure 3.4.2



Figure 3.4.1



Figure 3.4.2

3.5 Low battery voltage warning

If the alarm chirps once every 40 seconds, with FAULT indicator (yellow LED) will flash simultaneously. It indicates the battery is low. The LCD will display as follow:



Figure 3.5

NOTE: You need to replace the batteries immediately when the alarm enters this status.

NOTE: The alarm will not protect against the risk of carbon monoxide poisoning when the battery has drained.

NOTE: Refer to “5. Battery installation/replacement” when you hear the sounds of the low battery voltage warning.

3.6 Low battery voltage warning silence

When the alarm is under the low battery warning, press the TEST/SILENCE button, it will come into silence status for about 9 hours, and FAULT indicator (yellow LED) still keep flashing. The LCD will display for 5 seconds as Figure 3.6, then will re-display as Figure 3.5 when end of silence.



Figure 3.6

NOTE: When alarm under the low battery warning, please replace the battery in time to ensure the normal working.

3.7 End of life warning

If the alarm chirps 3 times every 40 seconds with FAULT indicator (yellow LED) flash. It indicates end of life of the CO alarm. You need to immediately replace the CO alarm. The LCD will display as follow:



Figure 3.7

3.8 End of life warning silence

When the alarm is under the end-of-life warning, press the TEST/SILENCE button, it will come into silence status for about 9 hours, and FAULT indicator (yellow LED) still keep flashing. The LCD will display as Figure 3.8 for 9 hours, then will re-display as Figure 3.7 when end of silence.



Figure 3.8

3.9 CO alarm warning

When the alarm detects a dangerous level of CO, the alarm will emit a loud alarm pattern. The alarm signal pattern is 4 quick beeps followed by 5 seconds of silence. This cycle repeats as long as a dangerous CO condition exists. The red alarm LED will flash simultaneously.

This signal will repeated until the alarm resets after dissipation of CO. When CO concentration is  $\geq$  30ppm, the LCD will display CO concentration as follow:



Figure 3.9

Sensitivity Setting: Conforms to UL Std. UL2034 4th Ed  
30PPM No alarm before 30days  
70PPM Between 60 to 240 minutes  
150PPM Between 10 to 50 minutes  
400PPM Between 4 to 15 minutes

NOTE: Refer to “4. What to do if the alarm sounds” when you hear the sounds of the CO alarm warning.

3.10 Humanized alarm sounds

Press and hold the TEST/SILENCE button, the alarm come into the status of CO alarm warning, the alarm will be in a lower alarm volume (<85dB) for around 10 seconds, then increase to a normal alarm volume (>85dB). It will avoid people to be scared suddenly by a loudness alarm sound.

3.11 Test the unit

Press the TEST/SILENCE button within 1 second, the LCD displays a maximum concentration as detected before press, LCD will display as following Figure 3.11.1; and restores the current concentration after 10 seconds. LCD will display as follow Figure 3.11.2.



Figure 3.11.1

To test the alarm, press and hold TEST/SILENCE button , you should hear alarm sound patterns and with a corresponding ALARM indicator (red LED) flash. The alarm sound patterns will stop when release TEST/SILENCE button. The test alarm sound pattern includes: 4 short beeps, 5 seconds pause, repeat the pattern until release TEST/SILENCE button. The LCD will display as follow:



Figure 3.11.2

NOTE: After the TEST/SILENCE button is enabled, the alarm sounds and the red alarm light flashes. This does not indicate that CO is present.  
NOTE: Test the unit weekly! If any time, the unit does not perform as described, replace it immediately.

3.12 Connect your alarms ( only GS828A-C)

1. Choose one Alarm as the master Alarm, 3x Press TEST/SILENCE button turn alarm into connect mode and the green light on.
2. Choose other Alarm as the slave Alarm, 3x Press TEST/SILENCE button turn alarm into learn mode and the green light on. Wait for a few seconds the green light flashing, Successful network matching.
3. Repeat step2 for connecting more Alarms, The Maximu quantity is 12. Make sure that you always use the same master Alarm. (Figure 3.12.2)
4. After all the alarms are connected, the master Alarm will automatically exit the connect mode in 5 minutes. You can also press the TEST/SILENCE button to exit manually.



Figure 3.12.1

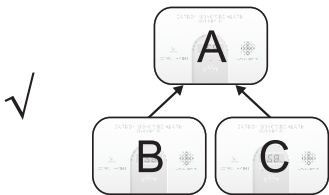


Figure 3.12.2

NOTE: The operations are limited to wireless devices.

3.13 Reset connection (only GS828A-C)

1. Restart the unit, waiting for countdown remaining 5 seconds for LCD, then press and hold the button.
2. Waiting for the yellow LED turns on for 3 seconds, when the yellow LED turns off to release the button within 3 seconds, then yellow LED is on again for 3 seconds.
3. Press the button during this period, the disconnection is completed.

FCC COMPLIANCE STATEMENT

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.

FCC warning:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: 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 or more 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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment

IC warning

- English:  
This device complies with Industry Canada licence-exempt RSS standard(s).  
Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

- French:  
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:  
(1) l'appareil ne doit pas produire de brouillage, et  
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.