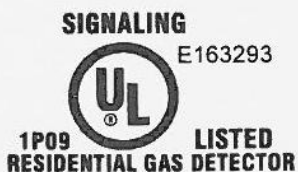




OWNERS MANUAL for Models:



STCH-1000	Natural (Methane) Gas Detector, direct plug in.
STCH-1000LC	Natural (Methane) Gas Detector, with 6ft. line cord.
STCH-1000HW	Natural (Methane) Gas Detector, direct wire in.
STCH-1000HWR	Natural (Methane) Gas Detector, direct wire in with relay option.

(ELECTRICAL RATING: 120VAC, 60Hz, 5 Watts)



PSM-011	Natural (Methane) Gas Detector, 12 VDC direct wire in with relay.
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(ELECTRICAL RATING: 12VDC, 5 Watts)

IMPORTANT! READ ALL INSTRUCTIONS BEFORE INSTALLATION AND SAVE THIS MANUAL FOR FUTURE REFERENCE.

WARNING! THIS DETECTOR WILL ONLY INDICATE THE PRESENCE OF NATURAL (METHANE) GAS AT THE SENSOR. NATURAL (METHANE) GAS MAY BE PRESENT IN OTHER AREAS. THIS DEVICE IS NOT A SUBSTITUTE FOR SMOKE OR FIRE DETECTORS (See limitations of detectors in section 9 for details).

CONTENTS OF THIS MANUAL

- 1.... GENERAL DESCRIPTION
- 2.... SPECIFICATIONS
- 3.... RECOMMENDED LOCATIONS OF DETECTORS
- 4.... LOCATIONS TO AVOID
- 5.... INSTALLATION INSTRUCTIONS
- 6.... OPERATION AND TESTING
- 7.... FALSE ALARMS
- 8.... MAINTENANCE
- 9.... LIMITATIONS OF NATURAL (METHANE) GAS DETECTORS
- 10... GOOD SAFETY HABITS
- 11... SERVICE AND WARRANTY

WARNING! DISCONNECTING OR LOSS OF AC POWER (OR DC POWER IN MODEL PSM-011) WILL RENDER THIS UNIT INOPERATIVE.

1. GENERAL DESCRIPTION

The natural (methane) gas detector provides an early residential warning of the presence of explosive natural (methane) gas and is factory calibrated to sound an alarm that meets UL1484 standard. The L.E.L. (Lowest Explosive Level) of natural (methane) gas is 5% in volume and the alarm level of this detector is set at 10 – 25% of the L.E.L. (Lowest Explosive Level).

When the alarm is triggered the red light and buzzer will stay on for a minimum of 5 minutes. If natural (methane) gas levels persist beyond the calibrated level, the detector will continue to alarm until the natural (methane) gas is cleared. See OPERATION section for further information.

There have been many cases of serious injuries and damages reported that were caused by natural (methane) gas leak explosions.

IMPORTANT! READ ALL OPERATION INSTRUCTIONS CAREFULLY. FAMILIARIZE YOUR FAMILY WITH THE ALARM SIGNAL AND WHAT TO DO IN THE EVENT OF AN ALARM.

2. SPECIFICATIONS

METHANE ALARM LEVEL	10 – 25% L.E.L.
POWER SOURCE	120VAC, 60Hz, 5 WATTS (FOR MODELS STCH-1000, STCH-1000LC, STCH-1000HW, STCH-1000HWR) 12VDC, 5 WATTS (FOR MODEL PSM-011)
OPERATING TEMPERATURE	32°F (0°C) TO 104°F (40°C)
ALARM SOUND LEVEL	85 dB AT 10 FEET
MINIMUM ALARM TIME	5 MINUTES
DETECTION FREQUENCY	SAMPLING EVERY SECOND
RELAY RATING	1A – 24VAC

3. RECOMMENDED LOCATIONS OF DETECTORS:

- Install at least one natural (methane) gas detector on every floor level (see figure 1).
- Install the detector close to every place that gas operated appliances are installed (see figure 1).
- Since natural (methane) gas is lighter than air (1:0.56), the greatest concentration of gas will be immediately under the ceiling. Mount detectors on the wall with the top edge of the detector at a minimum of 6" (15cm) and a maximum of 12" (30.5 cm) below the ceiling, and at least 2 feet (60.1 cm) from any corner (see figure 2).
- If the ceiling is sloped or higher than 8.5 feet (2.6 m), please ask your local Gas Company for advice about proper installation.

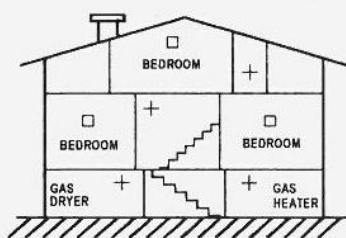
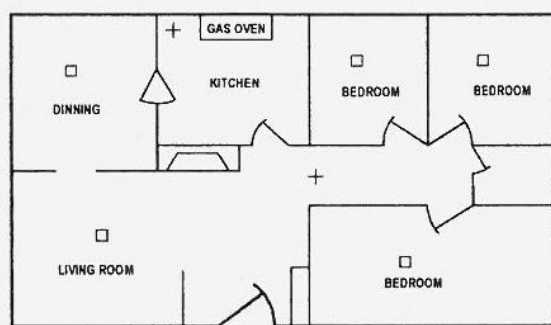


FIGURE 1



+ Detector placement for minimum protection.

□ Additional detector location for added protection.

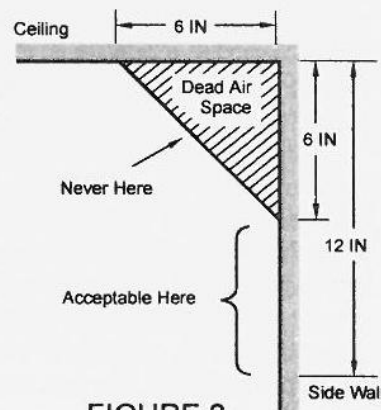


FIGURE 2

4. WARNING! LOCATIONS TO AVOID:

- IN AN AREA WHERE THE TEMPERATURE MAY FALL BELOW 32°F (0°C) OR RISE ABOVE 104°F (40°C)
- IN FRONT OF FORCED AIR DUCTS USED FOR HEATING AND AIR CONDITIONING, NEAR CEILING FANS, OR OTHER HIGH AIR FLOW AREAS.
- DIRECTLY ABOVE ANY GAS APPLIANCE.
- IN CLEANING SUPPLY ROOMS: CHEMICALS USED IN HOUSEHOLD CLEANING AND PAINTING SUPPLIES CAN CAUSE NUISANCE ALARMS.
- IN HAZARDOUS LOCATIONS: THIS DETECTOR IS NOT SUITABLE FOR INSTALLATION IN A HAZARDOUS LOCATION, AS DEFINED IN THE NATIONAL ELECTRICAL CODE.

5. INSTALLATION INSTRUCTIONS:

NOTE! REVIEW SECTION 3, RECOMMENDED LOCATIONS OF DETECTORS AND SECTION 4, LOCATIONS TO AVOID, PRIOR TO INSTALLING YOUR DETECTOR.

The proper power for the STCH-1000 series natural (methane) gas detectors is 120 volt single phase, supplied from a non-switchable circuit which is not protected by a ground fault interrupter.

a. WIRING REQUIREMENTS

Installation of STCH-1000:

The model STCH-1000 is a direct plug in unit. Be sure that the outlet on which you install the detector is not controlled by a switch and that the detector is not obstructed by drapes etc.

Installation of STCH-1000LC:

Model STCH-1000LC is designed to be wall mounted. It has an attached 6-foot line cord. Be sure that the outlet into which you plug the detector is not controlled by a switch and that the detector is not obstructed by drapes etc. Remove the mounting plate from the back of the detector (slide to remove).

Using the enclosed screws and anchors install the mounting plate on the wall 5 to 6 feet above the floor within cord reach of the outlet.

Install the natural (methane) gas detector on the mounting plate and slide to the left to lock the detector in place.

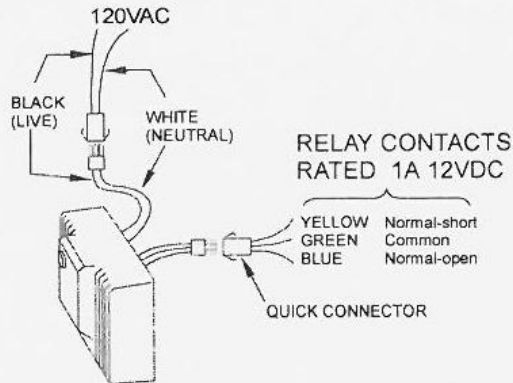


FIGURE 3: STCH-1000HW/HWR INSTALLATION

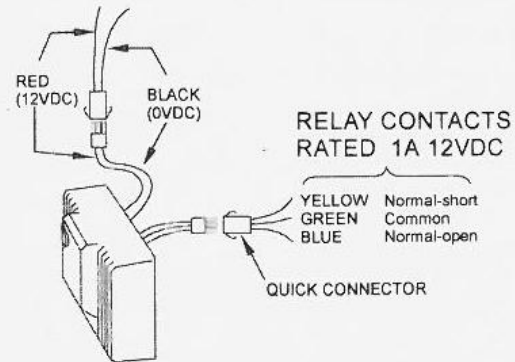


FIGURE 4: PSM-011 INSTALLATION

CAUTION! TURN OFF THE MAIN POWER TO THE CIRCUIT BEFORE WIRING THE DETECTOR.

Installation of STCH-1000HW:

This natural (methane) gas detector should be installed on a U.L. listed or recognized junction box. For the A.C. Quick Connector wiring connection, the black wire should be connected to the live side of AC line, and the white wire should be connected to the neutral side of AC line (see figure 3).

Installation of STCH-1000HWR:

Installation is similar to the STCH-1000HW. Three external wires are combined in a harness to serve as the relay connection. To link the external circuit with the relay, connect the green wire as Common port. The blue wire is for Normal-open (i.e. shorted when it is alarming or under test) connection, and the yellow wire is for Normal-short connection (see figure 3). The relay contacts are intended to be connected to devices such as central panel, extra buzzer, additional alarm lamp, control switch of gas source, etc.

Installation of PSM-011:

Model PSM-011 is designed to be wall mounted. Remove the mounting plate from the back of the detector (slide to remove).

Using the enclosed screws and anchors fasten the mounting plate on the wall 5 to 6 feet above the floor.

Install the natural (methane) gas detector on the mounting plate and slide to the left to lock the detector in place.

For the D.C. Quick Connector, the red wire should be connected to 12VDC, and the black wire should be connected to 0VDC (see figure 4).

Three external wires are combined in a harness to serve as the relay connection. To link the external circuit with the relay, connect the green wire as Common port. The blue wire is for Normal-open (i.e. shorted when it is alarming or under test) connection, and the yellow wire is for Normal-short connection (see figure 4). The relay contacts are intended to be connected to devices such as central panel, extra buzzer, additional alarm lamp, control switch of gas source, etc.

b. MOUNTING INSTRUCTIONS

- Remove the mounting plate from the back of the detector (slide to the unlock position to remove).
- After selecting the proper detector location as described in section 3, and wiring the QUICK CONNECT harness as described in the *WIRING REQUIREMENTS*, attach the mounting plate to the electrical box (see figure 5).
- Secure the mounting plate to the electrical box using the appropriate holes (see figure 5).
- Pull the QUICK CONNECTOR through the center hole in the mounting plate and mount the same.
- Plug the mating halves of the QUICK CONNECTOR together.
- If you have finished the *WIRING, AND MOUNTING PLATE* installation steps, you can install the detector on the mounting plate and slide the detector to the lock position.
- Turn on the A.C. power (12VDC for model PSM-011). The green "power on" indicator should be lit when the detector is receiving power.

After installation, TEST your detector by pressing and holding the **TEST/RESET** button for several seconds. Complete instructions regarding testing are outlined in section 6.

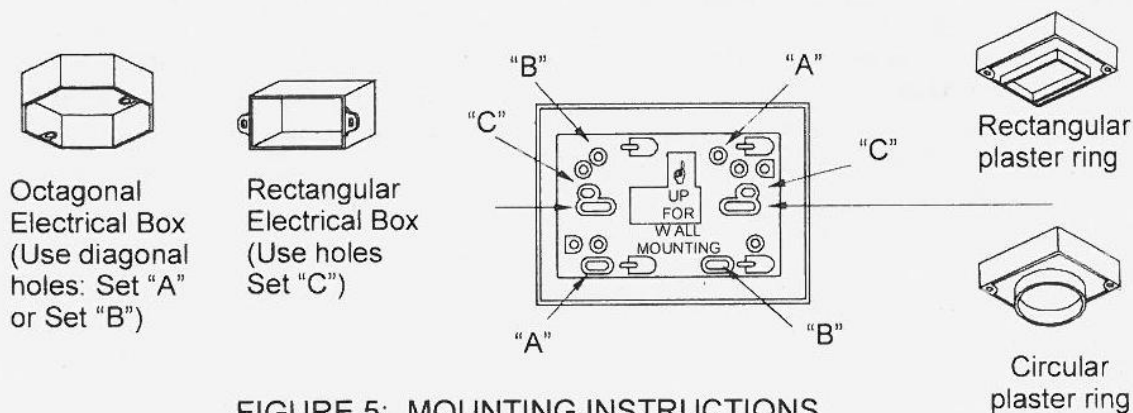


FIGURE 5: MOUNTING INSTRUCTIONS

6. OPERATION, TESTING

- a. **POWER ON:** When A.C. power (for models STCH-1000, STCH-1000LC, STCH-1000HW, STCH-1000HWR) or D.C. power (for model PSM-011) is applied, the natural (methane) gas detector requires a warm-up period to stabilize the sensor element of approximately 3 minutes. The green LED will flash during this period. When the green LED lights on solidly, the detector begins to detect natural (methane) gas concentrations once a second.
- b. **TROUBLE CONDITION:** The internal micro-controller continuously monitors the sensor and other critical components. If an internal failure of any of these components occurs, the detector will flash the red LED and buzzes four times every 30 seconds.
- c. **LIFE MONITOR:** The natural (methane) gas sensor has life expectancy of 5 years. The micro-controller monitors the total time that the detector is under power. After 5 years, the detector will flash the red LED and beep once in every 30 seconds, indicating that sensor life has expired.
- d. **ALARM MODE:** When natural (methane) gas concentration exceeds calibrated level (10-25% L.E.L.), the detector will sound "beep-beep" and turn on the red LED. If this dangerous condition lasts for 4 seconds, the natural (methane) gas detector will latch on alarm mode for 5 minutes with the red LED turning on and the buzzer sounding continuously. During this 5 minutes period, the detector will cease sensing gas concentrations and the green LED will flash to indicate same. If the natural (methane) gas level still persists beyond the calibrated level after 5 minutes, the detector will continue to alarm until the natural (methane) gas clears.
- e. **TESTING: IMPORTANT! TEST WEEKLY TO ENSURE PROPER OPERATION.** Test the detector by pushing the **TEST/RESET** button on the cover and hold it down. This will simulate a concentration of a natural (methane) gas exceeding the safety level. If all the electronic circuit and buzzer module are working, the detector will turn on the red LED and sound the buzzer continuously.
Do not try to test this detector in any other way.
If the detector does not respond properly, check the fuse or circuit breaker supplying power to the detector circuit. If the alarm still does not sound the unit may be defective or have other failure and should be returned for service (see section 11). An erratic or low sound coming from your alarm may indicate a defective detector, and it should be returned for service (see section 11).
- f. **RESET:** The detector will automatically reset itself when the natural (methane) gas which caused the alarm has cleared. The detector will however alarm for at least 5 minutes if it is not manually reset. You can also silence the detector by pushing the **TEST/RESET** button. The detector will need 30 seconds to reset its system and sensor; as in the warm-up period, the green LED will flash until it is ready to detect the presence of natural (methane) gas. If natural (methane) gas is still present, the detector will alarm again.
- g. **RELAY ACTION (for STCH-1000HWR and PSM-011):** To link the external circuit with relay, connect the green wire as Common port. The blue wire is for Normal-open (i.e. shorted when it alarms or under test) connection, and the yellow wire is for Normal-short connection.

7. FALSE ALARMS

This detector responds to the presence of natural (methane) gas. It does not detect smoke. **If the detector does alarm, get out of the house and call the Gas Company.** If no problem is found by the Gas Company, check to see if one of the reasons listed in section 4 may have caused the alarm.

Some solvents used in chemical cleaning agents, paints, varnishes and the furniture refinishing process, and some propellants used in aerosol hair spray and air-fresheners can cause the detector to alarm if they are used in close proximity to the detector for extended periods of time. Gasoline or other flammable liquids stored in open containers near the detector may also cause the detector to alarm. Never store flammable liquids in open containers.

IF YOU HAVE BEEN AWAY FROM HOME and you return to find your alarm sounding, DO NOT ENTER YOUR HOME. Call the Gas Company from a neighbor's home. DO NOT RE-ENTER YOUR HOME FOR ANY REASON UNTIL YOU HAVE BEEN ASSURED THAT IT IS SAFE TO DO SO.

NOTE: A newly installed detector may have picked up various fumes or gases that include natural (methane) gas during transit and storage. This accumulation of contamination can cause the detector to go into the alarm mode during the initial power up. You can choose to do nothing and the detector will stop sounding in a few minutes, or you can press the **TEST/RESET** button, which will stop the alarm immediately. It may be necessary to reset the unit several times to fully clear the sensor of the accumulated contamination.

8. MAINTENANCE: CLEANING YOUR DETECTOR

You can clean your detector by using a vacuum cleaner hose and vacuuming around the openings on the detector. The outside of the detector can be wiped with a damp cloth. NO chemical detergent should be used to clean this detector. **After cleaning, test your detector by using the TEST/RESET button and check that the green LED is on.**

9. LIMITATIONS OF NATURAL (METHANE) GAS DETECTORS

Natural (Methane) gas detectors are devices that can provide an early warning of the presence of natural (methane) gas at a reasonable cost. However, detectors have sensing limitations and may not always sound a warning of the presence of natural (methane) gas. STCH-1000 series A.C. powered detectors will not operate if the A.C. power has been cut off, such as by an electrical fire, a tripped circuit breaker or an open fuse. These detectors must be tested regularly to make sure that they are receiving power and operating properly. Detectors cannot sense natural (methane) gas that does not reach the detector and therefore, detectors may not detect natural (methane) gas, which is in a different area of a home. If the detector is located on a different level of the home or on the other side of a closed door, it may not waken a sound sleeper. The use of drugs and alcohol may impair one's ability to hear the alarm. If you have a multi-level home, install detectors on each level of the home. If the detector is installed in a hallway and the bedroom doors are kept closed at night, install a detector in each bedroom.

10.GOOD SAFETY HABITS:

a. DEVELOP AND PRACTICE A PLAN OF ESCAPE:

- Make a floor plan indicating all doors and windows and at least two (2) escape routes from each room. Second story windows may need a rope or chain ladder.
- Have a family meeting and discuss your escape plan, showing everyone what to do in case the alarm sounds.
- Determine a place outside your home where you can all meet if an alarm occurs.
- Familiarize everyone with the sound of the alarm and train them to leave your home when they hear it.
- Practice an escape drill at least once every six months. Practice allows you to test your plan before an emergency. You may not be able to reach your children in an emergency, so it is important that they know what to do.

b. WHAT TO DO WHEN THE ALARM SOUNDS:

- Leave immediately by your escape plan. Every second counts, so don't waste time getting dressed or picking up valuables.
- Once outside go to your selected meeting place and make sure everyone is there.
- Call the Gas Company from your neighbor's home – not from yours!
- Don't return to your home until the problem has been corrected or the officials say that it is all right to do so.

11.SERVICE AND WARRANTY:

If after reviewing this manual you feel that your natural (methane) gas detector is defective in any way, do not tamper with the unit. Return it for servicing.

NOTE!: DO NOT TRY TO REPAIR THIS DETECTOR YOURSELF.

TWO YEAR LIMITED WARRANTY

Patrick Plastics Inc. provides a 2 (two) years limited warranty on the natural (methane) gas detector. If the purchaser discovers that the unit is defective, she/he must send the natural (methane) gas detector prepaid with proof of date of purchase and a check in the amount of \$5.00 payable to Patrick Plastics Inc. (to cover the cost of shipping and handling) to **Warranty Service Dept., Patrick Plastics Inc., 18 Basaltic Road, Vaughan, Ontario L4K 1G6, Canada**. Upon receipt of same, the obligation of Patrick Plastics Inc. under this warranty is limited to repairing or replacing any parts which it finds under normal use, to be defective in material, workmanship or design and returning same to the customer. This warranty shall not apply to any natural (methane) gas detectors that have been opened, damaged, modified, abused or altered in anyway after the date of purchase, or if it fails to operate due to improper maintenance or inadequate A.C./ D.C. electrical power.

THE LIABILITY OF PATRICK PLASTICS INC. OR OF ANY OF ITS PARENT OR SUBSIDIARY CORPORATIONS ARISING FROM THE SALE OF THIS NATURAL (METHANE) GAS DETECTOR OR UNDER THE TERMS OF THIS LIMITED WARRANTY SHALL NOT IN ANY CASE EXCEED THE COST OF THE REPLACEMENT OF THE NATURAL (METHANE) GAS DETECTOR. IN NO CASE SHALL PATRICK PLASTICS INC. OR ANY OF ITS PARENT OR SUBSIDIARY CORPORATIONS BE LIABLE FOR CONSEQUENTIAL LOSS OR DAMAGES RESULTING FROM THE FAILURE OF THE NATURAL (METHANE) GAS DETECTOR OR FOR THE BREACH OF THIS OR ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE COMPANY'S NEGLIGENCE OR FAULT.

Since some states do not allow limitations on the duration of an implied warranty or do not allow the exclusions or limitations of incidental or consequential damages, the above limitations or exclusions may not apply to you. While this warranty gives you specific legal rights, you may also have other rights which vary from state to state.

The above warranty may not be altered by any agent, representative, dealer or employee.

PATRICK PLASTICS INC.
18 Basaltic Road
Vaughan, Ontario L4K 1G6
Canada

For all enquires, Call 1-800-203-7987 (US and CANADA)
905-660-9066 (Metro Toronto, CANADA)

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