

USER'S MANUAL

Version 1.00

WIRELESS **PLUG-IN** METHANE GAS ALARM WITH BATTERY BACK-UP AND SILENCE FEATURE

Comment [AR1]:

Need to check on power draw



100 - 240VAC ~ 50/60Hz, 0.3 Watts with Battery Backup

IMPORTANT! PLEASE READ CAREFULLY AND SAVE.

This unit was shipped with a Quick-Start Manual. This User's Manual is a full manual that contains important information about its operation and is available on

www.nysearch.org/methanedetector/manual

Printed in USA

Conforms to UL 1484
Model TFW-01

Northeast Gas Association/NYSEARCH

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BASIC SAFETY INFORMATION

- Dangers, Warnings, and Cautions alert you to important operating instructions or to potentially hazardous situations. Pay special attention to these items.
- This Methane Gas Alarm will only indicate the presence of explosive natural gas that reaches the sensor. The Methane Gas Alarm is not designed to sense smoke, heat or flames.
- When linked with other TFW-01 Methane Gas Alarms, when one detector indicates the presence of explosive natural gas, all linked alarms will sound.
- Do not stand too close to the unit when the alarm is sounding. It is loud to wake you in an emergency. Exposure to the horn at close range may harm your hearing.
- Do not paint over the unit. Paint may clog the openings to the sensing chambers and prevent the unit from operating properly.
- This unit must be powered by a 24-hour circuit. Be sure the circuit cannot be turned off by a switch, dimmer, or ground fault circuit interrupter. Failure to connect this unit to a 24-hour circuit may prevent it from providing constant protection.
- This Alarm must have AC or battery power to operate. If AC power fails and the battery is dead or missing, the alarm cannot operate. Battery power is intended only as a backup to intermittent power failure.
- Test the Alarm once a week. If the Alarm ever fails to test correctly, have it replaced immediately! If the Alarm is not working properly, it cannot alert you to a problem.
- This Methane Gas Alarm is intended for residential use and is not suitable for use in hazardous locations as defined in the National Electrical Code.

- This product is intended for use in ordinary indoor locations of family living units.
- The detector of this unit does not contain any poisons.

WHAT TO DO WHEN THE ALARM SOUNDS!

Warning: Activation of the Methane Gas Alarm indicates the presence of an explosive gas which can cause an explosion and/or fire.

When the unit senses natural gas, the display will emit a loud alarm pattern and the Red LED light will illuminate. The alarm pattern is a 1/8 second beep followed by a 1/8 second of silence then repeating.

When the alarm sounds:

- 1) Evacuate the premises;
- 2) Do not activate any electrical switch or telephone;
- 3) Contact your fire department.

Phone:

NOTE: If methane is present the unit will continue to alarm even if the "Test/Reset" button is pressed. Unit will stop alarming if gas is removed.

INSTALLATION

WHERE TO INSTALL THIS ALARM

Natural Gas is a fossil fuel composed mostly of Methane and is typically supplied through a main utility line connected to your home. Methane is much lighter than air and will rise rapidly in air.

For sensing Natural Gas, the Alarm should be mounted between 6 and 12 inches (152 mm and 305 mm) down from the ceiling to ensure the earliest opportunity to detect a leak, or directly on the ceiling. For ceilings over 8 feet high, mount with the power cord fully extended. See figures at end of manual.

Natural Gas is colorless and odorless. For safety reasons, an odorant (sulfur-based compounds called Mercaptans) is added so that any leak can be detected by smell. The common detection threshold for smelling the gases is around 20% of the Lower Explosion Limit (LEL). This can vary depending on the individual's sense of smell and how long they have been exposed to it. The LEL of Natural Gas defines the bottom range of flammability for the gas. Your Alarm is calibrated to sound before 25% of the LEL of Natural Gas (Methane) is detected. **Therefore, it is possible that you may smell gas before the Alarm is activated.**

This gas detector is approved for installation in homes. This detector should be located near sources of a potential gas leak. Some examples are a furnace, water heater, stove/oven. If potential sources of gas leaks are in two or more separated areas, it is recommended that a detector is installed in each area.

WHERE **NOT** TO INSTALL THIS GAS DETECTOR....

- Behind furniture, drapes, in closets or areas that will block air flow to the detector.
- Within 12 inches of corners, exterior doors, windows, heating or return vents, or other drafty areas.
- In or on outside walls or within 12 inches of corners.
- To a wall switch controlled power line, ground fault circuit or circuit breaker.
- DO NOT install this alarm in a Recreational Vehicle or a boat.



Placement of Battery

OPERATION

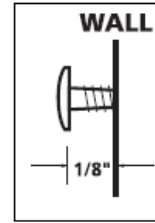
WARNING

Update picture

This alarm cannot detect gas or sound the alarm for three minutes after it has been powered on.

Install Battery: A 9-Volt battery is supplied with the unit. Install the battery by opening the battery door on the bottom edge of the unit. Take care that the battery is installed with the proper polarity (+ towards front of detector). Battery power is intended only as back-up power in the case of a power interruption. After installing the battery, plug the unit into an unswitched 120 VAC outlet.

NOTE: While operating under batter power, the unit is able to stay in the alarm state for 12 hours followed by a minimum of 7 days in the fault state.



**Screw Head
Distance
from Wall**

Mounting: See "Where to Install This Alarm" to help you choose the best location to mount the sensor. The mounting location should be within 10 feet of an unswitched 120VAC outlet. Mark the location for the two mounting holes on the wall spaced horizontally 4" apart. If you are mounting the alarm in plaster board or drywall, drill a 3/16" hole into the wall and insert the plastic anchors provided. Install the two screws provided into the wall or wall anchors until the screw head is approximately 1/8" from the wall. Hook the unit over the screw head and into the keyhole in back of the unit.

POWER ON Warm Up: When power is first applied the amber LED FAULT light will illuminate while the detector is warming up (about 1 – 3 minutes). At the end of that time the POWER LED will turn Green indicating full operation. A flashing Green light indicates that the power connector is not plugged into an active outlet and the unit is operating on battery power only. This unit is not designed to operate on battery power for extended periods of time and should be plugged into an unswitched powered outlet. A steady Green light indicates that the unit is powered by an outlet and a battery is installed; this is the designed mode of operation.

CAUTION: This detector cannot alarm during the 3 minute warm up cycle.

Connecting to a Network: This unit can be added to a Z-Wave network to alert a user of a gas leak out of range of the local detector. To add the unit to the network, put the controller (purchased separately) into the pairing/add/inclusion mode and then press the inclusion button on the side of the detector. The blue light will begin to flash to indicate it's in the pairing mode. When the blue light goes solid, the unit has been included in the network. If the blue light is not illuminated, the unit is not part of a network.

End of Life Signal: Sensor has a 3 Year Service Life as measured from the time that power is applied to the unit. All TFW-01 models include an End of Life (EOL) Signal indicating the sensor has reached the end of its service life and you must replace the alarm. The signal is a beep every 30 seconds. The EOL Signal may be reset by pushing RESET button on the alarm. This will reset the EOL Signal for a period of 48 hours (2 days).

Do not disconnect the Alarm until you have a replacement Alarm available to install.

TESTING

WARNING

TEST THE OPERATION OF THIS DETECTOR AT LEAST ONCE PER WEEK.

WARNING

THE TEST BUTTON ONLY TESTS THE ALARM CIRCUIT, NOT THE SENSOR. REPLACE THE ALARM AFTER 3 YEARS.

Simply press the RESET button at any time the alarm is powered. The alarm should sound. Release the switch.

IMPORTANT - If this alarm does not test properly return it immediately for repair or replacement.

ALARM SIGNAL: The Red LED ALARM light will illuminate and the audible signal will activate whenever the level of gas exceeds the alarm threshold. The unit will continue to alarm until the gas clears.

ALARM SIGNAL – MESHEDED: If the unit is connected to other units creating a meshed network and one of the other units detects gas exceeding the alarm threshold, the units alarm will sound BUT the Red LED ALARM will flash. This indicates that gas exceeding the allowable level has been found in the area but not by this detector. When the gas clears the alarm will cease.

See WHAT TO DO WHEN THE ALARM SOUNDS!

FAULT ALARM: A fault in the sensor operation will activate the malfunction alarm. The amber LED will illuminate and the alarm sounds once every 60 seconds for a minimum of 7 days. The Reset switch will silence the alarm for 1 hour. If the fault doesn't clear, the alarm will sound again. REMOVE THE DETECTOR IMMEDIATELY AND RETURN IT FOR REPAIR OR REPLACEMENT.

LOW POWER OPERATION: This detector will operate normally down to 102 VAC when plugged into a standard power outlet. Do not operate this detector below 102 VAC.

LOW BATTERY SIGNAL: If battery power gets low, the alarm will beep once every 60 seconds and the green LED will be flashing.

MISSING BATTERY SIGNAL: If a battery is not installed in the unit, the green LED will be flashing and the alarm will beep once every 15 seconds.

WARNING

THIS SENSOR IS SENSITIVE TO NATURAL GAS AND METHANE.
IT SHOULD NOT BE USED TO DETECT PROPANE, BUTANE OR OTHER FLAMABLE GASSES.

This detector will not work without power. Examples causing no power are: an open circuit breaker, a faulty power line connection, an open main breaker. This alarm will only indicate the presence of Natural Gas (Methane) at the sensor. Explosive gas may be present in other areas. If you smell unusual odors you may have a gas leak. Immediately call the local gas supplier/distributor or fire department to check for possible leaks.

This detector may not be heard. The alarm loudness meets or exceeds regulatory standards. However, if this alarm is in remote locations or behind closed doors the alarm may not be heard. Persons who are hard of hearing may not hear the alarm.

This detector is not a smoke/fire alarm. It is also not a carbon monoxide alarm. This alarm is not suitable for installation in hazardous areas as defined in the National Electrical Code.

WARNING

RESIDENTIAL AND INDUSTRIAL USE ONLY

This alarm is for use with 120 VAC power only. Do not cut the transformer wire and attempt to use as a 12 or 24 volt alarm. Cutting the transformer wire voids the warranty.

ORIGINAL OWNERS REPLACEMENT RECORD

Replace this alarm 3 years after retail purchase.

Purchase Date _____

Replacement Date _____

Installer _____

NOTE: The replacement date indicates the date beyond which the device may no longer detect accurately. The alarm should be replaced immediately.

LIMITED PRODUCTS WARRANTY

Northeast Gas Association warrants to the original user that this alarm will be free from defects of material or workmanship for a period of one (1) year. If defective in original materials or workmanship and returned, delivery costs prepaid, Northeast Gas Association will repair or replace this product free of charge.

LIMITS OF WARRANTY

Repair or replacement is your exclusive remedy under this limited warranty or any other warranty (including any implied warranty of merchantability for a particular purpose). Any and all implied warranties or merchantability or fitness for a particular purpose is limited to the warranty period from the original date of purchase.

Northeast Gas Association, its dealers and distributors shall in no case be responsible or in any way liable for any incidental or consequential damages for any reason. Some states do not allow the limitation or exclusion of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. This warranty gives you specific rights, and you may also have other rights that may vary from state to state.

WARRANTY RETURN POLICY

Warning-opening this product for any reason voids the warranty. There are no user serviceable parts in the case. This alarm requires an authorization number (RA) for repair or replacement. Call the Northeast Gas Association for an RA number. Pack the alarm carefully in a padded container. Include the RA number, an explanation of the problem, the original dated sales receipt, and your return address. Send, shipping prepaid, to:

Northeast Gas Association/NYSEARCH
 20 Waterview Boulevard, 4th Floor
 Parsippany, NJ 07054
 Customer Service Number: 973-265-1900 x200
 E-Mail: admin@nysearch.org
 Web: www.nysearch.org

SPECIFICATIONS

POWER SUPPLY	110-240 VAC 60-50 Hz
OPERATIONAL VOLTAGE	12VDC
NOMINAL CURRENT	1 Amp
OPERATIONAL TEMPERATURE	-22 F to 122° F, -30° C to 50° C
RELATIVE HUMIDITY	0 to 95%
AUDIBLE OUTPUT	85 dB @ 10 feet
VISUAL OPERATIONAL SIGNAL	GREEN
VISUAL ALARM SIGNAL	RED
VISUAL FAULT SIGNAL	AMBER
VISUAL PAIRING STATUS	BLUE
ALARM TRIGGER	< 25% of the LEL of Methane Gas
CASE DIMENSIONS	5.5"W x 5.0" H x 1.9" D
CASE MATERIAL	ABS
FLAME RATING	UL94-HB
WARRANTY	1 Year Limited
TESTING	Intertek
LABORATORY	UL 1484 Residential Gas Detectors
STANDARD	4 th Edition

HOW TO TAKE CARE OF YOUR DETECTOR

To keep your detector in good working order, you must;

- Test the alarm weekly. (See “TESTING”)
- Do not block or cover the alarm with any object that can prevent a gas leak from reaching the sensor.
- Observe the color of the indicator light on the front of the unit regularly. (See “OPERATION”)
- Clean the detector cover weekly. Hand clean using a damp cloth, or paper towel. Dry with a soft cloth.
- DO NOT SPRAY CLEANING AGENTS OR WAXES OR AEROSOLS directly onto the front panel. This action may damage the sensor, cause an alarm or cause a detector malfunction.

LED AND SOUNDER SIGNALS

Operation	Audible Signal	Visual Signal
Normal operation	None	Steady Green LED Light
Operation on battery power	None	Flashing Green LED Light
Gas Alarm	Beep Every 1/8 Second	Red LED Light
Gas Alarm – connected unit	Beep Every 1/8 Second	Flashing Red LED Light
Fault Alarm	Beep Every 60 Seconds	Amber LED Light
End of Life	Beep Every 30 Seconds	None
Low Battery Power	Beep Every 60 Seconds	Flashing Green LED Light
Missing Battery	Beep Every 15 Seconds	Flashing Green LED Light
Not Paired to another Z-Wave device	None	Flashing Blue LED Light
Paired to a Z-wave Controller	None	Steady Blue LED Light

Federal Communications Commission (FCC) Statement

FCC ID: 2AOLCTFW-01

FCC RF Exposure Statement

This device meets the FCC requirements for RF exposure in public or uncontrolled environments.

This device complies with FCC part 15 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

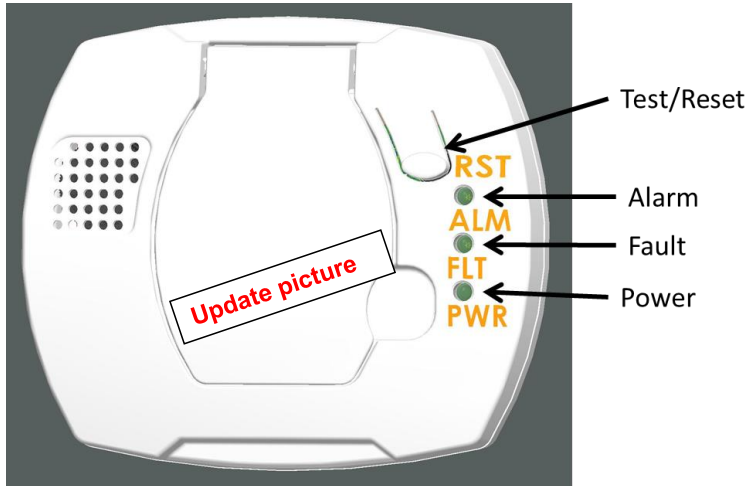
Changes or modifications not approved by Northeast Gas Association could void the user’s authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for 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

METHANE GAS DETECTOR CONTROLS



Test/Reset Button – press to silence alarm or test system

Alarm LED – solid red when gas detected above threshold level

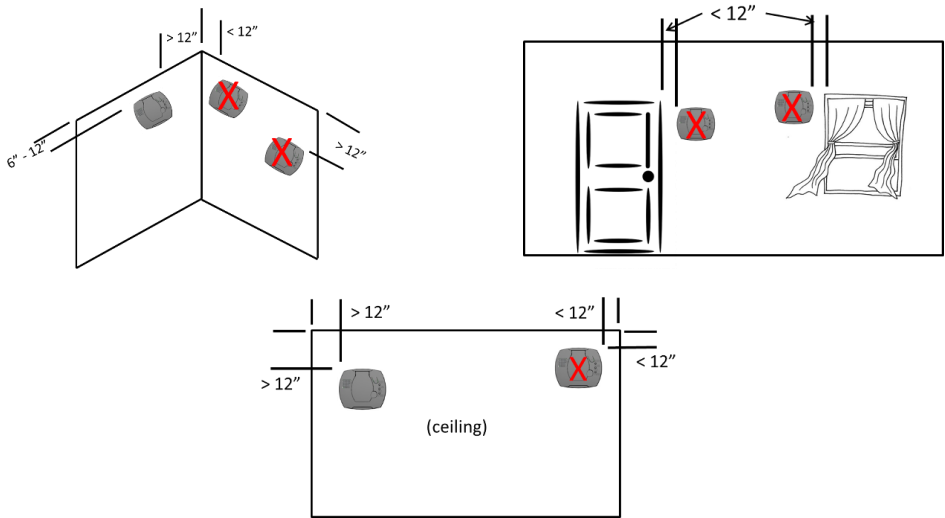
Fault LED – solid amber when a system fault is detected

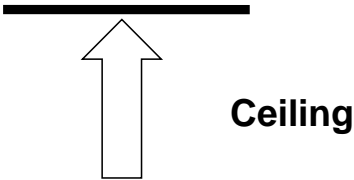
Power LED – solid green when plugged into house power, flashing green when running on battery

Communication LED – solid blue when paired to a Z-Wave controller, not illuminated if not paired

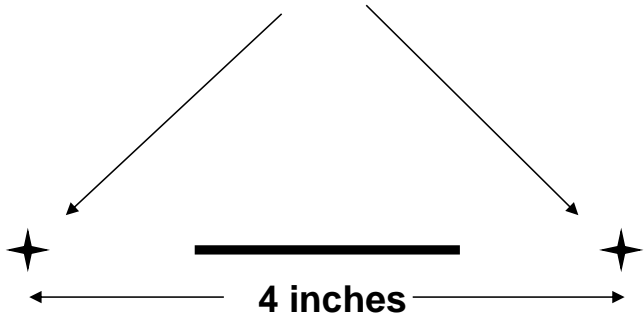
Inclusion Button – press when controller is in pairing mode to add detector to the network

INSTALLATION FIGURES





Template
Location of screws to mount
sensor



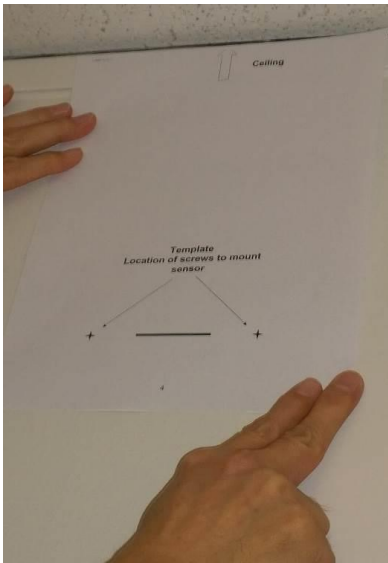


Figure 1: Locate template, top edge at ceiling

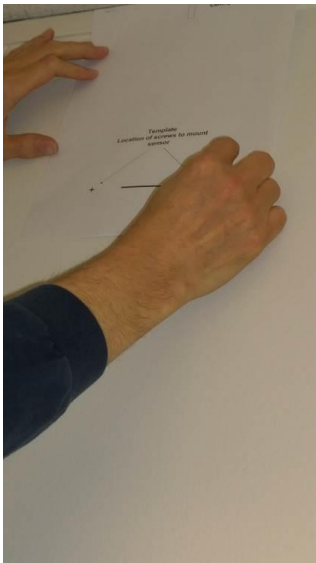


Figure 2: Use a pin to locate position of screws



Figure 3: Mount sensor on the two screws.