

## GasAlert Clip Extreme

The GasAlertClip Extreme 2 or 3 year gas detector (“the detector”) is a personal safety device that warns when hazardous gas exceeds factory set alarm setpoints. The detector stores and transmits gas alarm event data. It is your responsibility to respond properly to the alarms.

### Gases Detected

Oxygen (O <sub>2</sub> )	Percent by volume (%)
Carbon monoxide (CO)	Parts per million (ppm)
Hydrogen sulfide (H <sub>2</sub> S)	Parts per million (ppm)
Sulfur dioxide (SO <sub>2</sub> )	Parts per million (ppm)

## ⚠ Safety Information—Read First

**Warning:** Substitution of components may impair Intrinsic Safety.

**Warning:** Bump test the O<sub>2</sub> sensor before each day’s use to confirm its ability to respond to gas by exposing the detector to a gas concentration that exceeds the alarm setpoints. Manually verify that the audible and visual alarms are activated.

- Do not activate the detector after the date on the package.
- This product is a gas detector, not a measurement device.
- Perform a self-test each day prior to use.
- Ensure the sensor grill is free of dirt, debris, and is not obstructed.
- Calibrate and/or bump test the detector in a normal atmosphere (20.9% O<sub>2</sub>) that is free of hazardous gas.
- Periodically test the response of the sensor to gas by exposing the detector to a target gas concentration that exceeds the low alarm setpoint. Manually verify that the audible and visual alarms are activated.
- Periodically calibrate the GasAlertClip Extreme oxygen (O<sub>2</sub>) detector.

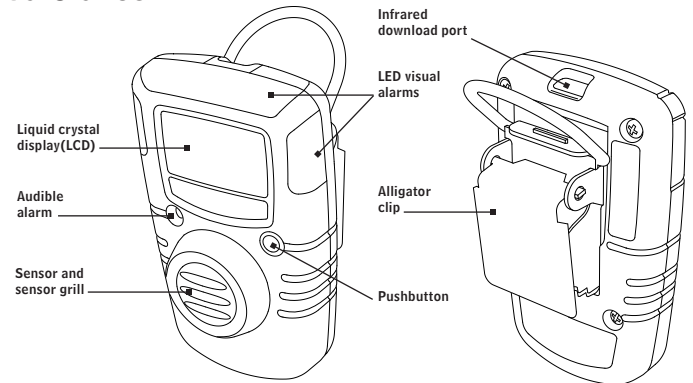
## ♻ Recycling

This instrument contains a lithium battery. Do not mix with the solid waste stream. Spent batteries should be disposed of by a qualified recycler or hazardous materials handler.

## About This Instruction Sheet

Title	GasAlertClip Extreme ADJ Instruction Sheet
Description	This Instruction Sheet is a reference for the activation, operation and maintenance of the GasAlertClip Extreme GA24XTH501 gas detector with adjustable setpoints.
Part Number	50104153-004
Release Date	05-2012

## At a Glance




## LCD and Elements

	Test	Self-test status
	HIGH LOW	High and low alarm setpoints
	Wi-Fi	Data transmission
	max% ppm	Maximum exposure in alarm
	CO <sub>2</sub> SO <sub>2</sub>	Gas type
	HIGH LOW ALARM	Alarm condition
	888 hours months days	Detector life-remaining indicators
	888 hours months days	Months-days-hours since last maximum gas exposure alarm

## ○ Pushbutton Functions

Activate detector	Press and hold ○ for 5 seconds
Perform self-test	Press and hold ○ for 1 second when LCD displays <b>Test</b>
Calibrate oxygen sensor	Press and hold ○ for 3 seconds
Perform auto zero	Press and hold ○ for 3 seconds
View maximum gas exposure	Press ○ within 24 hours of a gas alarm exposure
Transmit data	Press ○ when LCD displays <b>Prn</b> and
Display gas alarm setpoints	Press ○ during normal operation
Toggle between gas alarm setpoints	For GA24XT-H510 detectors only. Press and hold ○ for three seconds when alarm setpoints are displayed during the self-test sequence.

## Activate the Detector

1. Move to a normal atmosphere (20.9% O<sub>2</sub>) that is free of hazardous gas.
2. Press and hold the Pushbutton  for 5 seconds.
3. The detector beeps and vibrates once.
4. The LEDs flash once.
5. The detector performs self-test. This may take several minutes. For more information, refer to **Self-Test**.
6. When Self-Test is successful, the detector beeps and vibrates once and the LEDs flash once. The detector then displays the Detector Life-Remaining Clock.

**Note:** Once the detector is activated, it cannot be deactivated except after a battery life-ending alarm. For more information, refer to **Automatic Battery Test and Safety Shutdown Mode**.



## Self-Test

The detector performs self-test before any other function. Self-test must be performed in a normal atmosphere (20.9% O<sub>2</sub>) that is free of hazardous gas. After self-test is performed, wait 30 seconds before using the detector to ensure that it accurately detects gas.


### When is self-test required?

- Prior to each day's use; and
- When the LCD displays **Test**.

### Perform Self-Test

1. Move to a normal atmosphere (20.9% O<sub>2</sub>) that is free of hazardous gas.
2. Press and hold  for 1 second.
3. Confirm that the following tests are performed:
  - a) The detector beeps and vibrates once.
  - b) The LEDs flash once.
  - c) The LCD displays all elements.
  - d) The LCD flashes **Test** while sensor integrity and battery life are tested.
  - e) The LCD displays low and high alarm setpoints.
  - f) If an alarm has occurred in the last 24 hours, the LCD displays the maximum gas exposure value and the hours that have elapsed since the exposure.
  - g) The LCD flashes **Prn** and .
4. After self-test is performed, wait 30 seconds before using the detector to ensure that it accurately detects gas.

### Self-Test Pass

When self-test is successful, the detector beeps and vibrates once. The LCD displays  to confirm that self-test was successful. **Test** displays again 22 hours after performing self-test to indicate that a new self-test is required.

### Self-Test Fail

If self-test fails, the detector beeps 5 times and the LEDs flash before the LCD displays a blank screen. The LCD then returns to the normal operation screen and displays **Test**. Repeat self-test.

If self-test fails 3 consecutive times, the LCD displays a blank screen and the detector deactivates. For more information, refer to **Safety Shutdown Mode**.

## Automatic Battery Test

The detector automatically tests the battery every 2 hours.


### Battery Test Fail

If a battery test fails, another test is initiated 30 minutes later. After 5 consecutive battery test failures, the LCD displays a blank screen and the detector deactivates. For more information, refer to **Safety Shutdown Mode**.

## Detector Life-Remaining Clock

The detector life-remaining clock counts down the amount of operating time remaining in months, then days, then hours.

## Detector Life-Ending Alarm

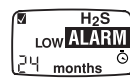
The detector life-ending alarm occurs when the battery life-remaining clock displays **0 hours**. The detector continues to operate for a maximum of 8 hours after the detector life-ending alarm activates. To deactivate the detector, press .



- Audible: 1 beep every 30 seconds
- Visual: 1 flash every 30 seconds
- Vibration: 1 slow vibration every 30 seconds

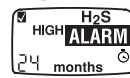
## Gas Alarms

### Low Gas Alarm



- Audible: 1 slow beep every second
- Visual: 1 slow flash every second
- Vibration: 1 slow vibration every second

### High Gas Alarm



- Audible: 2 fast beeps every second
- Visual: 2 fast flashes every second
- Vibration: 2 fast vibrations every second

Battery life decreases rapidly when the detector is in alarm condition. When alarm gas level returns to an acceptable range, the alarm deactivates.

## Gas Alarm Setpoints

Gas alarm setpoints are factory configured and cannot be modified.

### Display Setpoints

Press  during normal operation.

### Factory Setpoints

Detector Model	Low Alarm	High Alarm
GasAlertClip Extreme O <sub>2</sub>	19.5%	23.5%
GasAlertClip Extreme CO	35 ppm	200 ppm
GasAlertClip Extreme H <sub>2</sub> S	10 ppm	15 ppm
GasAlertClip Extreme H <sub>2</sub> S	5 ppm	10 ppm
GasAlertClip Extreme SO <sub>2</sub>	5 ppm	10 ppm

### Customize Setpoints



Detectors may be configured with customer-specified alarm setpoints. For more information, contact BW Technologies by Honeywell.

## Toggle Between Alarm Setpoints

**Note:** The toggle feature is available for H<sub>2</sub>S detectors with **ADJ** on the order number label only.



Toggle between alarm setpoints for default and secondary gas concentrations during self-test or when viewing maximum gas exposure.

1. Move to a normal atmosphere (20.9% O<sub>2</sub>) that is free of hazardous gas.
2. Press . If self-test has not been completed in the previous 22 hours, the detector performs self-test.
3. When the LCD displays low or high alarm setpoint screen, press and hold  for 3 seconds.
4. When the setpoint toggle is successful, the detector beeps at the beginning and end of the button press.
5. The LCD displays the new low and high alarm setpoints, then proceeds to the **Prn** screen.

## Safety Shutdown Mode

The detector initiates safety shutdown mode when:

- Self-test fails 3 consecutive times;
- Automatic battery test fails 5 consecutive times; or
- The detector has not been manually deactivated within 8 hours of detector life-ending alarm activation.

If the event logs have not been downloaded, contact BW Technologies by Honeywell.

### What happens during safety shutdown?



- The LCD displays a blank screen when the detector initiates safety shutdown mode.
- The detector beeps and vibrates.
- The LEDs flash 2 times per second for 15 seconds.
- The LCD displays **OFF** or an error code, depending on the reason for the safety shutdown.

## Auto Zero (H<sub>2</sub>S, SO<sub>2</sub>, and CO models only)

Auto zero can only be performed when the low alarm setpoint is below the setpoints shown in the following table:

Model	Low Alarm Setpoint
GasAlertClip Extreme CO	25 ppm
GasAlertClip Extreme H <sub>2</sub> S	5 ppm
GasAlertClip Extreme SO <sub>2</sub>	3 ppm

### Perform Auto Zero

1. Move to a normal atmosphere (20.9% O<sub>2</sub>) that is free of hazardous gas.
2. Press and hold  for 3 seconds. If self-test has not been completed in the previous 22 hours, the detector performs self-test.
3. The LCD displays **ZEr ppm** and the gas type.
4. The LCD displays low alarm setpoint and high alarm setpoint.
5. If an alarm has occurred in the past 24 hours, the LCD displays the maximum gas exposure value and the hours that have elapsed since exposure began.
6. The LCD flashes **Prn** and .


## Maximum Gas Exposure

When a gas exposure alarm initiates, the detector records the maximum gas exposure level and begins calculating the number of hours elapsed since the maximum exposure alarm began.

For each new exposure greater than the current maximum exposure, the detector resets the maximum gas exposure level to the new level and resets **hours** to **0**.

After 24 hours of gas readings in the acceptable range, the detector resets maximum gas exposure level and **hours** to **0**.

### View Maximum Gas Exposure

1. Within 24 hours of receiving a gas alarm, press .
2. The LCD displays the low and high alarm setpoints.
3. If a maximum gas exposure has occurred within 24 hours, the LCD displays the maximum gas exposure level and number of hours elapsed since the maximum exposure alarm began.
4. If the maximum gas exposure is beyond the detection range, the LCD displays **OL** (over limit).

## Calibrate Oxygen (O<sub>2</sub>) Detector


O<sub>2</sub> detector calibration must be performed in a safe area that is free of hazardous gas in an atmosphere of 20.9% oxygen.

### When is oxygen detector calibration required?

- Every 30 days; or
- When the LCD displays **CAL** and the detector life-remaining value.

A calibration may also be performed if the O<sub>2</sub> detector has not been used recently or is in a false alarm state.

### Perform O<sub>2</sub> Detector Calibration

1. Move to a normal atmosphere (20.9% O<sub>2</sub>) that is free of hazardous gas.
2. Press and hold  for 3 seconds. If self-test has not been completed in the previous 22 hours, the detector performs self-test.
3. The detector beeps and flashes once. The LCD displays **CAL** and O<sub>2</sub>.

### O<sub>2</sub> Detector Calibration Pass

When O<sub>2</sub> detector calibration is successful, the detector beeps and vibrates once, then returns to normal operation.

### O<sub>2</sub> Detector Calibration Fail

If O<sub>2</sub> detector calibration fails, the detector does not beep or vibrate. Repeat O<sub>2</sub> detector calibration. If the second attempt fails, contact BW Technologies by Honeywell.






## Transmit Gas Event Data

The detector stores the last 10 events such as maximum gas exposure, bump test, and auto zero. The recorded data includes:

- detector serial number;
- detector life-remaining values (months/days/hours);
- self-test performed;
- total number of events that have occurred;
- event type;
- duration of all events;
- gas type;
- alarm level(s) in ppm or %;
- time elapsed since the alarm occurred (days/hours/minutes); and
- duration of the alarm (minutes/seconds).






Transmit data directly to the IR Handheld Printer. Use the IR DataLink to transmit gas event data to a personal computer (PC).

### Transmit Data to a Personal Computer

1. Connect the IR DataLink to the computer.
2. Place the detector 2 inches from the IR DataLink.
3. On the detector, press  to access the transmission screen.
4. The LCD flashes **Prn** and . Within 5 seconds, press  to begin data transmission.
5. During data transmission, the LCD displays  and  flashes. The LCD displays a percentage value to indicate how much data remains to be transmitted.
6. The detector beeps and vibrates once when transmission is complete.

For more information, refer to the **IR DataLink User Manual**.

### Transmit Data to an IR Handheld Printer

1. Place the detector 2 inches from the IR Handheld Printer.
2. On the detector, press  to access the transmission screen.
3. The LCD flashes **Prn** and . Within 5 seconds, press  to begin data transmission.
4. During data transmission, the LCD displays  and  flashes. The LCD displays a percentage value to indicate how much data remains to be transmitted.
5. The detector beeps and vibrates once when transmission is complete.

For more information, refer to the **IR Handheld Printer User Manual**.

## General Specifications

**Shelf life:** 1 year before activation

**Weight:** 76 g (2.7 oz.)

### Instrument dimensions:

28 x 50 x 81 mm (1.1 x 2.0 x 3.2 in.)

### Operating temperatures:

H<sub>2</sub>S: -40 to +50°C (-40 to +122°F)

CO: -30 to +50°C (-22 to +122°F)

SO<sub>2</sub>: -30 to +50°C (-22 to +122°F)

O<sub>2</sub>: -20 to +50°C (-4 to +122°F)

### Internal vibrating operates to :

-15°C (+5°F)

**Operating humidity:** 5% to 95% relative humidity (non-condensing)

**Audible alarm:** ≈ 95 dB at 30 cm (1 ft.)

**Visual alarm:** Flashing, wide-angled alarm lens with quad red LEDs plus alarm LCD readout

**Display:** Liquid crystal display (LCD)

**Sensor type:** Electrochemical cells

### Detection technique:

Instantaneous alarm

**Battery:** Lithium, non-replaceable

**Ingress protection:** IP 66/67

**Alarm setpoints:** Instant

low and instant high

### Calibration:

H<sub>2</sub>S, CO, SO<sub>2</sub>: Not required

O<sub>2</sub>: Self-calibrating

**Note:** This product has been classified for use in atmospheres not more than 21% v/v O<sub>2</sub>.

## Safety Specifications

### Maximum Operating Life,

**24-month detector:** 2 years after activation, assuming 3 to 25 minutes of alarm time per day

### Maximum Operating Life,

**36-month detector:** 3 years after activation, assuming 1.5 minutes of alarm time per day

### Detection Range:

H<sub>2</sub>S: 0 to 100 ppm

CO: 0 to 300 ppm

SO<sub>2</sub>: 0 to 100 ppm

O<sub>2</sub>: 0 to 30% by volume

## Ratings and Certifications

Classified by UL to both U.S. and Canadian Standards as intrinsically safe for Class I, Division 1, Group A, B, C, D and Class I, Zone 0, Group IIC

### ATEX:

CE 0539 Ex II 1G

Ex ia IIC T4 Ga IP66/67

DEMKO 08 ATEX 0814213

### IECEx:

Ex ia IIC T4 Ga IP66/67

IECEx UL 08.0018

### CE:

European Conformity

ABS Type Approved VA-348-169-X

## EC Declaration of Conformity

[www.gasmonitors.com/](http://www.gasmonitors.com/)

Declarations\_of\_Conformity

## Event Logging Specifications

### Number of stored events:

Up to 10 events encountered.

If more than 10 events are encountered, older events are replaced by the newer events.

### Data transmission methods:

Via infrared port to thermal printer, or via IR DataLink to computer (for ordinary locations only)

### Information transmitted:

Serial number; life remaining; self-tests performed; total number and duration of all events encountered

### Last 10 events:

Maximum exposure; MicroDock II bump check; O<sub>2</sub> calibration, or auto zero

### Data shown for maximum

#### exposures and bump checks:

- Gas type and alarm level in ppm or %
- Time elapsed since the alarm occurred in days, hours, and minutes
- Duration of alarm in minutes and seconds
- Data transmission time: 45 seconds plus 10 seconds per record

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 and ICES-003 Canadian EMI requirements. 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 the 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.

## Limited Warranty and Limitation of Liability

BW Technologies (BW) warrants this product to be free from defects in material and workmanship under normal use and service for a period of two or three years (depending upon detector), beginning on the date of activation. This Warranty is valid only if the detector is activated by the date on the package. This warranty extends only to the sale of new and unused products to the original buyer.

BW's warranty obligation is limited,

at BW's option, to refund of the purchase price, repair, or replacement of a defective product that is returned to a BW authorized service center within the warranty period. In no event shall BW's liability hereunder exceed the purchase price actually paid by the buyer for the Product.

This warranty does not include:

- a) fuses, disposable batteries or the routine replacement of parts due to the normal wear and tear of the product arising from use;
- b) any product which in BW's opinion, has been misused, altered, neglected or damaged by accident or abnormal conditions of operation, handling or use; or
- c) any damage or defects attributable to repair of the product by any person other than an authorized dealer, or the installation of unapproved parts on the product

The obligations set forth in this warranty are conditional on:

- d) proper storage, installation, calibration, use, maintenance and compliance with the product manual instructions and any other applicable recommendations of BW;
- e) the buyer promptly notifying BW of any defect and, if required, promptly making the product available for correction. No goods shall be returned to BW until receipt by the buyer of shipping instructions from BW; and
- f) the right of BW to require that the buyer provide proof of purchase such as the original invoice, bill of sale or packing slip to establish that the product is within the warranty period.

THE BUYER AGREES THAT THIS

WARRANTY IS THE BUYER'S SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BW SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, INCLUDING LOSS OF DATA, WHETHER ARISING FROM BREACH OF WARRANTY OR BASED ON CONTRACT, TORT OR RELIANCE OR ANY OTHER THEORY.

Since some countries or states do not allow limitation of the term of an implied warranty, or exclusion or limitation of incidental or consequential damages, the limitations and exclusions of this warranty may not apply to every buyer. If any provision of this warranty is held invalid or unenforceable by a court of competent jurisdiction, such holding will not affect the validity or enforceability of any other provisions.

## Warranty Registration

Register the product warranty at:  
[www.gasmonitors.com/support](http://www.gasmonitors.com/support)

## Contact BW Technologies by Honeywell

### Corporate Headquarters

2840 - 2 Avenue SE  
Calgary AB  
Canada T2A 7X9

### America

405 Barclay Blvd.  
Lincolnshire IL  
USA 60069

### Europe

Hatch Pond House  
4 Stinsford Road  
Nuffield Industrial Estate  
Poole Dorset BH17 0RZ  
United Kingdom

### Telephone

Toll Free Canada: 1-800-663-4164  
Toll Free Europe: +44(0)1295 700300  
Toll Free USA: 1-888-749-8878  
Other Countries: +1-403-248-9226

### Email

[info@gasmonitors.com](mailto:info@gasmonitors.com)

### Web

[www.gasmonitors.com](http://www.gasmonitors.com)