

HSS Hire



Personal Gas Detector

Continuously monitoring the atmosphere for dangerous levels of four separate gases Carbon Monoxide, Hydrogen Sulphide, Oxygen and Methane



... have you been trained

The law requires that personnel using this type of equipment in the workplace must be competent and qualified to do so. Training is available at HSS Training 0845 766 7799

...any comments?

If you have any suggestions to enable us to improve the information within this guide please e-mail your comments or write to the Safety Guide Manager at the address below e-mail: safety@hss.com

©HSS Hire Service Group Ltd 2011 No. SS033/01

Group Office: 25 Willow Lane, Mitcham, Surrey CR4 4TS

Web Site: <http://www.hss.com>

Code 34098

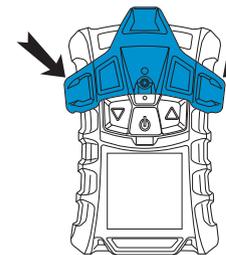
each day's use on a known concentration of methane equivalent to 25 - 50% of full scale concentration. Accuracy must be within 0 to +20% of actual. Correct accuracy by performing the calibration procedure within this manual.

To **perform a Bump Test**, from the normal measure screen press the **Down** button to display "BUMP TEST?". Verify the gas concentrations displayed match the Calibration Check Gas Cylinder. If they do not, adjust the values through the Calibration Setup menu.

Attach the calibration cap to the device.

Insert tab on calibration cap into slot on device.

Press calibration cap as shown



until it seats onto device.

Press both side tabs down onto device until they snap in.

Ensure that the calibration cap is properly seated.

Connect one end of the tubing to the calibration cap.

Connect other end of tubing to the cylinder regulator [supplied in the calibration kit].

Press the ON/OFF button to start the bump test then open the valve on the regulator. The hour-glass will flash and the sensors will respond to the gas.



After the Bump Test completes, the device momentarily displays "BUMP PASS" or "BUMP ERROR" along with the label of any sensor that failed before returning to Measure mode. If the device fails the Bump Test, return unit to HSS Hire.

The "tick" symbol will be displayed in the Measure mode for 24 hours after a successful Bump Test.

TROUBLESHOOTING

When "ERROR TEMP" appears on display, means temperature is below -40°C or above 75°C. The device must be returned to normal temperature range. Return this unit to HSS Hire.

"ERROR EE", "ERROR PRG" or "ERROR RAM" indicate memory errors. Return unit to HSS Hire.

"ERROR UNK" means unknown error occurred. Return unit to HSS Hire.

"LOW BATT" warning repeats every 15 seconds. Remove from service as soon as possible and recharge battery.

"LOW ALARM" means battery is completely discharged. Device is no longer sensing gas. Remove from service and recharge battery.

"ERROR CHARGE" indicates charge error. Device must be between 10° C and 36° C to charge. Return unit to HSS Hire.

"SENSOR ERROR" indicates missing sensor. Verify if sensor is properly installed.

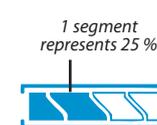
When the device does not turn on means the battery is low. Fix the problem by charging the device.

♥ Sensor warning. Sensor is near the end of its life.

⚠ ♥ Sensor alarm. Sensor has reached the end of its life. Return unit to HSS Hire.

MAINTAINING POWER SOURCES

The battery condition icon is continuously displayed in the upper right-hand corner of the display. Each indicator segment represents approximately 25 % of the total battery capacity.



The nominal run-time of the device at room temperature is 24 hours. Actual run-time will vary depending on ambient temperature and alarm conditions.

A Low Battery Warning indicates that a nominal 30 minutes of operation remain before the battery's charge is depleted.

ATTENTION!

If battery warning alarm activates, stop using the device as it no longer has enough power to indicate potential hazards, and persons relying on this product for their safety could sustain serious personal injury or death.

When the device goes into Low Battery Warning, the battery life indicator flashes, alarm sounds, alarm LEDs flash and the battery icon in the upper right-hand corner of the display shows empty battery. The device repeats this warning every 15 seconds and continues to operate until it is turned off or battery shutdown occurs.

The device goes into battery shutdown mode 60 seconds before final shutdown. "Low Batt" flashes on the display and alarm sounds and lights flash. Alarm cannot be silenced. No other pages can be viewed. After approximately one minute, the device automatically turns off.

WARNING!

When battery shutdown condition occurs LEAVE THE AREA IMMEDIATELY.

Recharge the battery straightaway.

CHARGING THE BATTERY

To Charge the Device firmly **insert the device into the charging cradle. The battery symbol will scroll through a progressively increasing number of segments and the charge LED will be red until 90 % of full charge has been**

GENERAL SAFETY

For advice on the safety and suitability of this equipment contact HSS Hire.

There is a serious risk of personal injury if you do not follow all instructions laid down in this guide.

The hirer has a responsibility to ensure that all necessary risk assessments have been completed prior to the use of this equipment.

This equipment should only be used by an operator who has been deemed competent to do so by his/her employer.

This equipment may be used in a workplace subject to a permit to work, it is the hirer's responsibility to ensure that the equipment's technical specification meets the requirements of any such permit to work prior to starting work. For further technical information contact HSS Hire.

This equipment should be used by an able bodied, competent adult who has read and understood these instructions. Anyone with either a temporary or permanent disability, should seek expert advice before using it.

Keep children, animals and bystanders away from the work area. Cordon off a NO GO area using cones and either barriers or tape, available for hire from HSS Hire.

Never use this equipment if you are ill, feeling tired, or under the influence of alcohol or drugs.

This equipment has been designed to alert the user to potentially hazardous atmospheres whilst carrying out his/her normal duties. Therefore, the instrument must be kept switched on and worn as close to the breathing area as possible.

Make sure you know how to operate this equipment safely and are aware of its limitations before you use it. Remember that this equipment does not guarantee life protection but if used correctly it will help provide a safer environment to work in.

Make sure that anyone in the immediate work area is warned of what you are doing.

Check the condition of the equipment before use. If it shows signs of damage or excessive wear, return it to HSS Hire.

Always check the function and calibration of the device before each use. Otherwise there is a danger that incorrect results will be displayed.

Do not block sensor openings as this may cause inaccurate readings.

Do not press on the face of the sensors, as this may damage them and cause erroneous readings.

Do not use compressed air to clean the sensor holes, as the pressure may damage the sensors.

ELECTRICAL SAFETY

This equipment is powered by a battery, which may be recharged using the charger provided. The charger is designed to plug into a standard 230V 13A power socket.

To recharge the unit please see "MAINTAINING POWER SOURCES".

Never use the charger or charge the battery in a potentially explosive atmosphere.

Keep the equipment dry - using electrical equipment in very damp or wet conditions can be dangerous.

Keep the charger and its power supply cable out of harm's way. Never carry or pull the charger by its power supply cable.

If an extension lead is used for the charger it should be fully unwound and loosely coiled, away from the equipment. Never run leads through water, over sharp edges or where they could become a trip hazard.

If the charger fails, or if its power supply cable or plug gets damaged, return it. Never attempt to repair it yourself.

To reduce the risk of electric shock, use a suitable RCD (Residual Current Device) available from your local branch of HSS Hire.

GETTING STARTED

HSS Personal Gas Detector is designed to assess potential worker exposure to combustible and toxic gases and vapours as well as low levels of oxygen.

DANGER

This product is supporting life and health. Inappropriate use, maintenance or servicing may affect the function of the device and thereby seriously compromise the user's life.

If you have any questions or concerns, please contact HSS Hire for advice

Never use the HSS Personal Gas Detector until you have fully read and understood this User Guide and the machine has been properly set up using the information it contains.

BUTTON DEFINITIONS

The devices have three buttons for user operation. Each button can function as a "soft key".

The Power button is used to turn device on or off and to confirm user action selections. When the Up button and the power button are pressed simultaneously for device start-up, the Options Setup Mode displays.

The Down button is used to move forward through data screens in measuring mode, or as page back and to decrease the values in set-up mode. Holding this button for 3 seconds while in Normal Measure Mode will activate the Instant Alert alarm.

The Up button is used to reset peak, STEL TWA and acknowledge alarms [where possible] or access calibration in measuring mode. It is also used as page up or to increase the values in set-up mode.

LED DEFINITIONS

The GREEN Safe LED flashes once every 15 seconds to notify the user that the device is on and operating.

The RED LEDs are visual indications of an alarm condition or any type of error in the device.

The YELLOW LED is a visual indication of an device fault condition. This LED will be on when device memory error occurs or sensor is missing or sensor error occurred.

The Charge LED is a visual indication of charge status. Red indicates charging is in process, green, the charging is complete.

OPERATING BEEP

This operating beep activates every 30 seconds by momentarily beeping the horn and flashing the alarm LEDs. The beep feature operates when it is enabled, device is on normal Measure Gases page, when the device is not in battery warning and is not in gas alarm and audible and visual options are enabled.

OPERATING INSTRUCTIONS

TURNING THE INSTRUMENT ON/OFF

Turn the instrument ON by pressing the Power button. Instrument will warm up and show info & set points. To switch it OFF press and hold the Power button.

Once the gas detector is switched ON all alarm settings including HIGH, LOW STEL & TWA alarms will display on instrument start-up.

MOTION ALERT ACTIVATION

To activate or deactivate the Motion Alert feature, press the "Up" button while the Motion Alert Activation page is displayed. When the Motion Alert feature is active, the Motion Alert symbol will flash every 3 seconds. The device will enter pre-alarm when no motion is detected for 20 seconds. This condition can be cleared by moving the device. After 30 seconds of inactivity, the full Motion Alert alarm is triggered. This alarm can only be cleared by pressing the "Down" button.

The device can monitor the concentration of the following toxic gases in ambient air:

- Carbon Monoxide [CO]
- Hydrogen Sulphide [H2S]

The device displays the gas concentration in parts per million [ppm] on the measuring page.

The device has four gas alarms: HIGH, LOW, STEL, TWA

The device monitors the oxygen concentration in ambient air. The alarm set points can be set to activate on two different conditions: enriched when oxygen concentration exceeds 20.8 % or deficient when oxygen concentration drops below 19.5 %.

The device also can monitor concentrations of Combustible Gases and Methane in ambient air.

FRESH AIR SETUP - FAS

The FAS is for automatic Zero calibration of the device. The FAS has limits. The zero of any sensor that is outside of these limits will not be adjusted by the FAS command.

If this option is enabled, the device displays "FAS?", prompting the user to perform a Fresh Air Setup. Press the Power button within 10 seconds to perform the Fresh Air Setup. The device will start FAS. The screen will show a No Gas Symbol, a blinking hourglass, and all enabled gas sensor readings. At the end of the FAS Calibration, the device displays "FAS OK" or "FAS ERR" along with the flags of the sensors that were outside of the FAS limits. All sensors that are within the FAS limits will be zeroed.

MEASUREMENT MODE

In Normal Operation mode (Measurement Mode), the user can check the Minimum and Peak readings prior to clearing the STEL and TWA values or performing a Span and Zero Calibration.

The following options pages can be executed from the Normal Operation screen:

| | |
|--|--|
| The Bump Page allows the user to perform a bump check. | |
| The Peak Page shows the peak readings for all sensors. | |
| The Min Page shows the minimum reading for the oxygen sensor. | |
| The STEL Page shows the calculated STEL readings of the device. | |
| The TWA Page shows the calculated TWA readings of the device. | |
| This Time / Date Page shows actual time and date settings of the device. | |
| The Motion Alert allows the Motion Alert Feature to be activated or deactivated. | |

PERFORMING A BUMP TEST

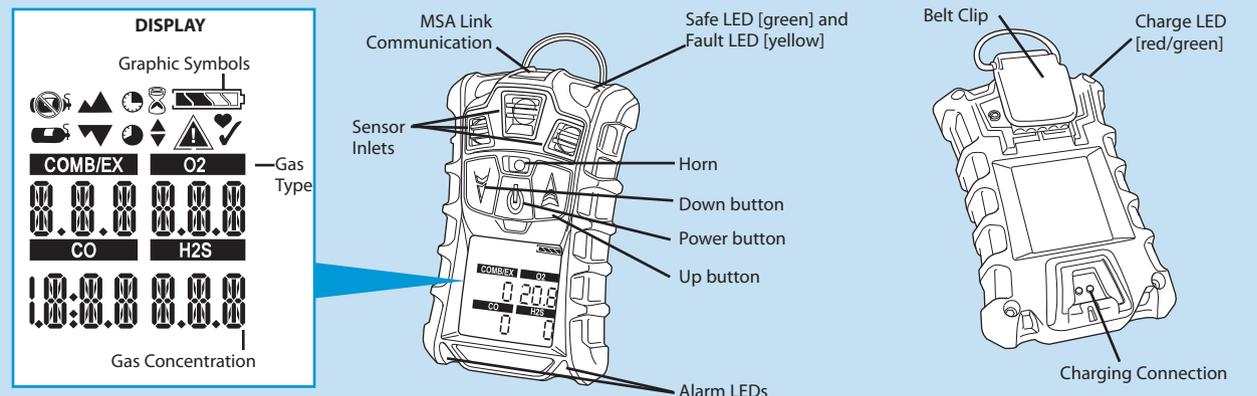
ATTENTION!

Perform a bump test before each day's use to verify proper operation, test gas can be purchased from HSS. The device must pass the bump test. If it fails the bump test, then this unit must be returned to HSS.

This test quickly confirms that the gas sensors are functioning correctly.

It is required that the device's sensitivity be tested before

IDENTIFIER



| | | | | | |
|--|---|--|--|--|---|
| | Alarm Symbol – Indicates alarm state. | | Sensor Labels. | | PEAK Symbol – Indicates a PEAK reading or high alarm. |
| | Motion Alert – Indicates Motion Alert is active. | | Cal Gas Cylinder – Indicates cal gas must be applied. | | Minimum – Indicates a minimum value or low alarm. |
| | Bump Check Symbol – Indicates successful bump or cal. | | No Gas Cylinder – Indicates cal gas should not be applied and device must be exposed to fresh air. | | STEL Symbol – Indicates a STEL alarm. |
| | Indicates required interaction. | | Hourglass – Indicates user should wait. | | TWA Symbol – Indicates a TWA alarm. |
| | Battery Condition – Indicates the battery charge level. | | | | Sensor life Symbol – Indicates the end of sensor life |