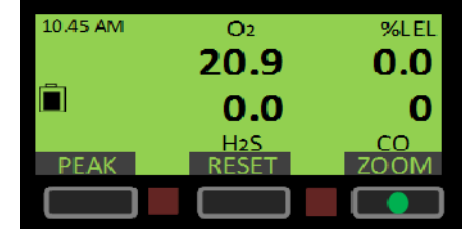
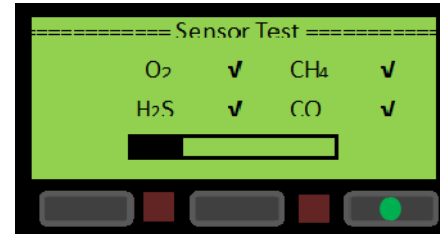


# G450 Multi-gas Monitor - Basic Operation

# GfG Instrumentation

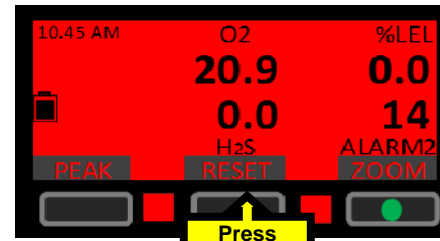
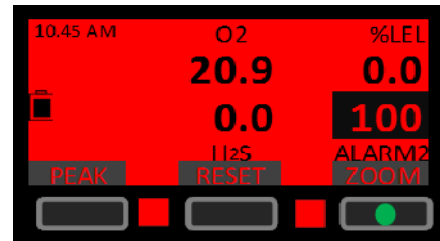
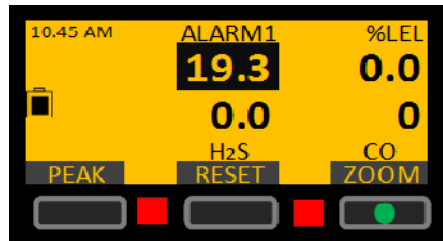
## Turning the G450 "ON"

Press the right hand button for about 1 second. Upon activation the first display is the GfG logo, G450 and software version in the upper right corner. The next displays are "Self Test" (A1, A2, A3) including activation of the audible, visual, and vibrating alarms. Then "User" and "Location" with date/time and a "Sensor Test". For each sensor installed, the next screens will show the full scale measuring range, alarm set points, and 3 previous calibrations. If applicable, a notice and alarm will be given if a Bump Test or Calibration is overdue. Then "NEXT INSPECTION" date, "ALL SENSORS READY" and finally "ALARMS ACTIVE Monitoring". Once the self-test and warm-up is complete, the G450 is in the Detection Mode. Calibrate or Bump Test if necessary.



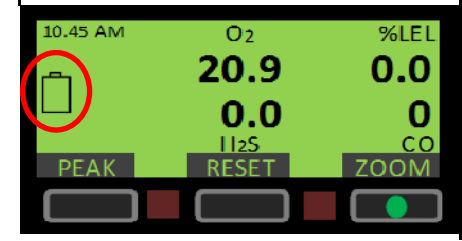
## Gas Concentration Alarm Indications

When the A1 alarm level is activated, the LCD is backlit in yellow, "ALARM1" alternates with the appropriate gas ID, and the concentration display contrast inverts (w/ audible, visual, and vibrating alarms). When the A2 or A3 alarm levels are activated, the LCD is backlit in red, "ALARM2" or "ALARM3" alternates with the gas ID, and the concentration display contrast inverts (w/ audible, visual, and vibrating alarms). To reset latching gas concentration alarms, press the (RESET) button when the concentration is below the alarm set point.



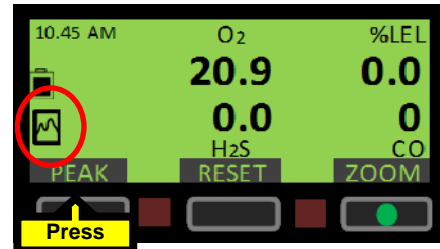
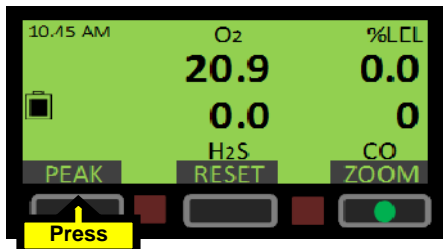
## Low Battery Alarm

A Low Battery is indicated with a flashing empty battery icon. Audible and visual alarms are activated once every minute. The monitor automatically shuts off in 15 minutes.



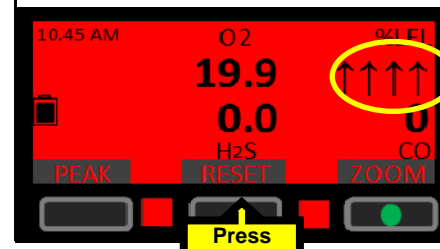
## Peak Hold Mode

Pressing the (PEAK) button will activate the Peak Hold Mode. In this mode, only the highest combustible gas and toxic gas readings and the lowest O2 readings are displayed. All sensors and alarms are functioning as normal. Peak Hold Mode is identified by the symbol in the lower left corner. Press (PEAK) button again to return to the Detection Mode.



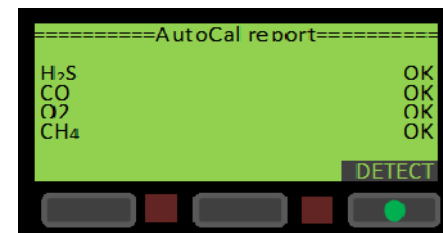
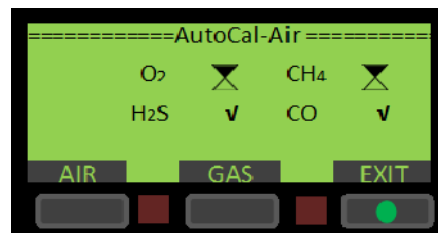
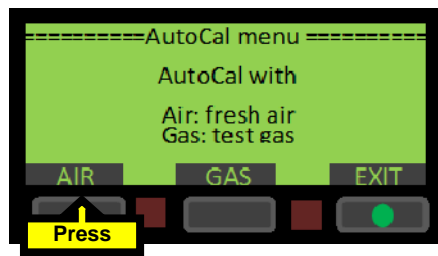
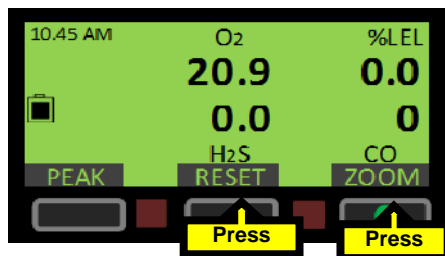
## Sensor Over-range

If the full scale measuring range is exceeded, up arrows will appear in the concentration display. For the %LEL scale, take to a known fresh environment to reset. When in a known fresh air environment, press the (RESET) button. Confirm you are in a Fresh Air environment by pressing (YES). After a brief warm up period, the sensor will be ready for operation.



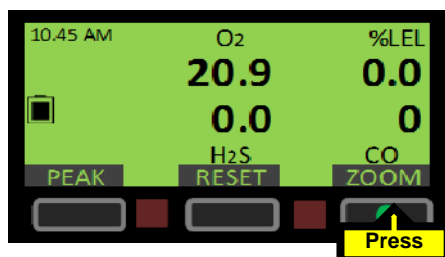
## Fresh Air Calibration

When in the Detection Mode and in a fresh air environment, press both the (RESET) and (ZOOM) button simultaneously for about 1 second and then release. This will activate the AutoCal menu. Press the (AIR) button to start the Fresh Air Calibration. The monitor will enter a short count down then begin the Fresh Air Cal procedure. All sensors installed are shown with hourglass next to the chemical formula. The hourglasses will change to a check marks as the adjustments are made (approximately 1 minute). A successful calibration will indicate OK in the "AutoCal report" and return to the Detection Mode. If unsuccessful, take proper corrective actions.



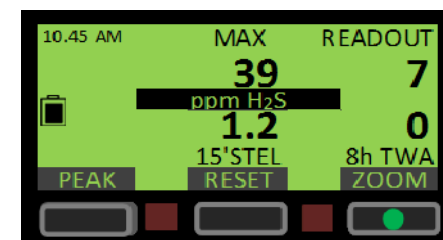
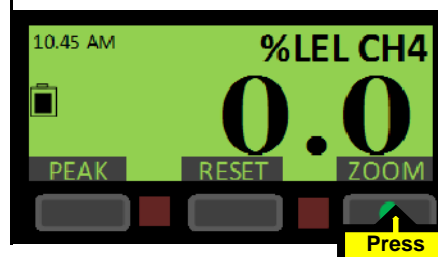
## Zoom Mode and Battery Check

When in the Detection Mode, press the right (ZOOM) button momentarily. This will activate the "Zoom Mode", where each gas measured is shown individually in a very large font (all sensors are still measuring). Continuing to press the (ZOOM) button will sequence through each sensor installed and battery capacity % remaining. Ten seconds after the last button press, the monitor returns to the Detection Mode.



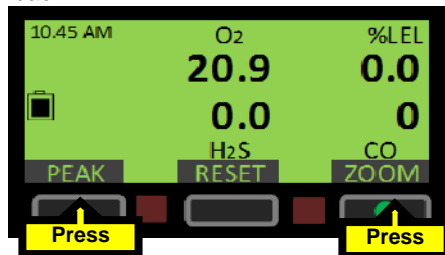
## Exposure Mode: MIN, MAX, STEL and TWA Values

While in the "Zoom Mode", press and hold the (ZOOM) button for about 2 seconds to activate the "Exposure Mode". Along with the current readout the following exposure data is shown: MAX Combustible Gas; MIN Oxygen (O2); and MAX, STEL & TWA for Toxic Gases. Pressing the (ZOOM) button again will sequence through each sensor installed and battery capacity % remaining. Ten seconds after the last button press, the monitor returns to the Detection Mode.



## Display "Flip"

Press the (PEAK) and (ZOOM) buttons at the same time and the display will flip (invert). This allows you to read the display while the monitor is attached to someone's clothing or belt with the bite clip. Press the (PEAK) and (ZOOM) to flip back.



## Turning the G450 "OFF"

Press and hold the (ZOOM) button. After 5 seconds, the unit enters a 3 second count down. Do not release the button until the fast repeating audible alarm sounds and the display goes blank.

