

Quick Start Guide for the GX-2012

This document serves as a quick reference guide and is not intended to replace the user manual. It is recommended to consult the user manual for more detail. Geotechnics has relied on the information in the user manual to develop this guide and makes no representation of warranty as to the accuracy of the guide.

1. About the GX-2012

The GX-2012 is a 4-gas portable gas detector with a built-in pump which allows sampling from potentially dangerous areas. The GX-2012 measures the standard confined space gases which include oxygen, carbon monoxide, hydrogen sulphide and methane.

2. Turning the GX-2012 On

- a. Push the wide opening of the rubber nozzle over the GX-2012's quick-connect inlet fitting.
- b. Press and briefly hold the 'POWER/ENTER' button until you hear a beep.
- c. The GX-2012 will begin its warm up sequence. During this sequence, you should see information such as the battery voltage and alarm levels.

3. Measuring Mode (Home Screen)

- a. After a successful warm-up sequence, the screen should display the following: 'CH4 0%LEL, OXY 20.9%, CO 0ppm, H2S 0.0ppm'.
- b. If all systems are operating well, you should see a rotating fan symbol and a flashing heart symbol in the upper-right section of the screen.
- c. Allow sufficient warm-up time (~5 minutes or more) and perform a Fresh Air Adjustment before entering potentially dangerous atmospheres.

4. Fresh Air Adjustment

- a. Only carry out a Fresh Air Adjustment in an atmosphere with normal oxygen quantities (20.9%) and known to be free of toxic or combustible gas.
- b. Press and hold the 'AIR' button until prompted to release.
- c. If the CH4, CO and H2S channels read 0 (zero); and OXY reads 20.9%, the Fresh Air Adjustment was successful.

5. Turning the GX-2012 Off

- a. Ensure you are in a known atmosphere that is free of toxic or combustible gas and has normal oxygen quantities (20.9%) before turning off the GX 2012.
- b. Press and hold the 'POWER/ENTER' button for three beeps, after which the unit will turn itself off.

6. Tips

- 6.1 Pump/Sample Train Integrity Test
 - a. Place a finger over the tip of the rubber nozzle. After a few seconds the GX-2012 will go into flow fail, the pump will stop and alarms will activate.
 - b. Press the 'RESET/SILENCE' button to reset the alarm and restart the pump.
- 6.2 Oxygen Sensor Test
 - a. Exhale near the tip of the rubber nozzle until OXY shows 19.5% and the alarms are activated.
 - b. Press the 'RESET/SILENCE' button to reset the alarms and wait for OXY to return to 20.9% before using.

7. Troubleshooting

Symptom		Possible Cause(s)	Recommended actions
1	The Unit cannot turn on	Flat/defective battery	Disconnect and re-connect the battery pack Charge the lithium-ion batteries Charge the GX-2012
2	The display indicates 'FAIL SYSTEM' during start-up along with an error code	A circuit fault has occurred	If the error code is 031, press and release the 'RESET/SILENCE' button to continue without data-logging function In the event of any other error code(s), return to Geotechnics
3	Display indicates 'FAIL CLOCK' during start-up	Internal clock failure with unit's memory	Press the 'RESET/Silence' button to temporarily use the unit. Attempt to set the date in the 'DATE' menu Contact Geotechnics if the problem continues
4	The heart symbol in the upper-right of the screen stops blinking or disappears	A microprocessor error	Return to Geotechnics
5	Abnormally high or low readings	The LEL or CO filters may require replacing The GX-2012 may require recalibration The affected channel(s) may require replacing	Check that the internal particle and hydrophobic filters are clean – contact Geotechnics for assistance Return to Geotechnics if the problem continues
6	The display indicates flow failure and does not recover after the 'RESET/SILENCE' button is pressed	The cotton filter or filter holder is dirty or clogged The hydrophobic filter disks or wire mesh disk are dirty or clogged The sampling hose (if one is used) has a kink or obstruction	Turn the unit off & on Clear and clean the filter holder Return to Geotechnics if the problem continues
7	Readings are not registering	Leak in the sample train Pump diaphragm damaged	Check the flow integrity Return to Geotechnics if the problem continues