

## OVERVIEW

EXO is a cloud-connected area monitor that continuously measures gas concentrations in the ambient environment at sites, facilities, and fence lines. EXO activates notifications when concentrations of toxic and combustible gases exceed configured setpoints.

## HARDWARE



- A. Siren/Lights
- B. Pump cartridge cover
- C. LCD screen
- D. Connectivity light
- E. LiveResponse light
- F. Navigation buttons
- G. Power button
- H. Microphone
- I. SOS latch pull/PTT latch push
- J. Speaker
- K. Battery retention screws
- L. Battery power gauge
- M. Battery pack
- N. Serial and information label
- O. Interface port A and B
- P. Power port
- Q. Manual calibration inlet
- R. Inlets 1 to 4



## EXO PLACEMENT

When placing EXO:

- Keep EXO upright and accessible.
- Do not hang EXO by its handle.

For more information on placing EXO, see the [EXO Technical User Manual](#).

## POWERING ON EXO

**To power on EXO:**

1. Press and hold the power button for two seconds. EXO will sound a chime, the top lights will flash, the screen will display the active features on EXO, and the green connectivity light will stop flashing and become solid, indicating EXO is connected.

If you see an **O<sub>2</sub> stabilizing** message on EXO's screen, it means EXO is not monitoring. Stabilization typically takes approximately 10 seconds but can take up to 20 minutes if EXO has been powered off for a significant period.

2. After you power on EXO and complete the startup sequence, EXO opens the main menu with Setup wizard selected. Press **OK** to start the Setup wizard.

EXO will continue to monitor for gas in the area during the Setup wizard. Low urgency notifications, an SOS latch pull, or dangerous gas levels will override the Setup wizard.

## MENU

EXO's menu is where you can access functionality such as gas options, messages, settings, and advanced info.

**To use EXO's menu:**

1. Press the center button to open the main menu and confirm menu selections.
2. Use the up and down buttons to navigate options.

## CHARGING EXO

Use any of the following EXO accessories to charge EXO. For more information on using these accessories, see the [EXO Technical User Manual](#).

- Trickle Charger
- Solar Panel
- Quick Charger

## NOTIFICATIONS

EXO communicates notifications using lights, sound, and an on-screen message specific to the event. Notifications must be acknowledged, and the triggering conditions addressed, before they can be cleared from the device.

**IMPORTANT:** Always follow your company's safety protocol for responding to notifications. For low and high urgency notifications, Blackline Safety recommends leaving the area.

### GREEN LIGHT

A flashing connectivity light indicates that EXO is not currently connected to Blackline Live and is not sending data.

A solid connectivity light indicates that EXO is actively transmitting data and is connected to Blackline Live.

### BLUE LIGHT

The blue LiveResponse light lets you know that remote monitoring personnel are responding to an alert by following your organization's emergency protocol. When monitoring personnel have confirmed the safety of everyone in the area and resolved the alert, the blue LiveResponse light will turn off.

### YELLOW LIGHT

Yellow lights indicate two types of notifications. Both types of notification include yellow flashing lights, sound, and an on-screen message specific to the event.

#### Operational:

- Triggered by routine and expected device operations.
- Local to your device; monitoring personnel are not notified.

#### Low urgency:

- Triggered by an unexpected condition that could pose a safety risk if not addressed in a timely manner.
- Local to your device and monitoring personnel are not notified.

### RED LIGHT

A red light at the top of your device indicates a **High urgency** notification.

- Triggered by events that require your immediate attention and action.
- If your organization is monitored, high urgency notifications are immediately communicated to monitoring personnel and automatically generate an alert in Blackline Live.

**To acknowledge and mute a notification:**

1. Press and hold the up and down arrow buttons at the same time to mute the notification and acknowledge the banner message.

**NOTE:** For continuous gas exposure, EXO will unmute itself after two minutes for low urgency and one minute for high urgency if detected gas levels have not returned to normal.



## GAS SAMPLING

EXO Pump has four inlets. When connected to tubing, the inlets allow one EXO to monitor multiple remote areas. Inlets must be assigned before they are functional. For more information, see the [EXO Technical User Manual](#).

**To assign inlets:**

1. Power on EXO and press OK to open the main menu.
2. Use the arrows and OK button to select **Gas options**.
3. Select **Inlet settings**. By default, the pump inlets (1-4) will display as OFF.
4. Using a tube fitted with a quick connect coupling insert, attach the tube to the desired inlet.
5. Select **Inlet settings**, and then select the inlet you connected the tube to in step 4.
6. Use the arrows and OK button to toggle the inlet to ON. This pump inlet is now functional.

**Single gas sampling inlet**

When one inlet is toggled on, EXO will first purge for two minutes to clear out any gas from the sensors, then continuously draw air from the inlet.

This setup is best for confined space entry, or any other situation where it is vital to continuously sample from a hazardous area.

**Multi gas sampling inlet**

When multiple inlets are toggled on, EXO will begin a sampling cycle. EXO will cycle through each inlet by pulling in gas from one inlet at a time and then purging in between each of the samples. While EXO is purging itself, there will be gaps in readings.

Due to these gaps in readings, a multiple-inlet sample setup is best used for long-term monitoring of remote areas.

**IMPORTANT:** If you start the pump while operating at temperatures of  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ) or lower, EXO will generate a pump blocked alarm that persists until the inlet warms up and begins operating normally. In a multiple inlet sampling cycle, the inlets do not have time to warm up. For temperatures below  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ), use only single gas sampling.

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## BUMP TESTING AND CALIBRATING

Bump testing and calibration verify that your device's gas sensors and notification indicators are functioning correctly.

### To bump test or calibrate EXO:

1. Connect a gas cylinder to EXO's manual calibration inlet using calibration tubing.
2. Press the OK button to enter the main menu.
3. Select **Gas options**, and then select **Bump test** or **Calibration**.
4. Confirm your selection by selecting **Yes**. EXO will run an audio/visual self test.
5. Follow the screen prompts to complete the bump test or calibration, ensuring that you select all the sensors you want to test. You will be prompted to bump test or calibrate until all the selected sensors have been tested.

## LEARN MORE

Visit [support.blacklinesafety.com](https://support.blacklinesafety.com) to find support and training materials for EXO, including the comprehensive [EXO Technical User Manual](#).

## TECHNICAL SUPPORT

### North America (24 hours)

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