

Inspections before use

1. Check that the battery level is sufficient.
2. Check that there are no bends or holes in the gas sampling hose and filter tube.
3. Check that the filter in the gas sampling probe and filter tube are free of dust or clogging.
4. Check the gas monitor + (1) Relay tube + (2) Filter tube + (3) Gas sampling hose + (4) Gas sampling probe in order to make sure they are connected properly.

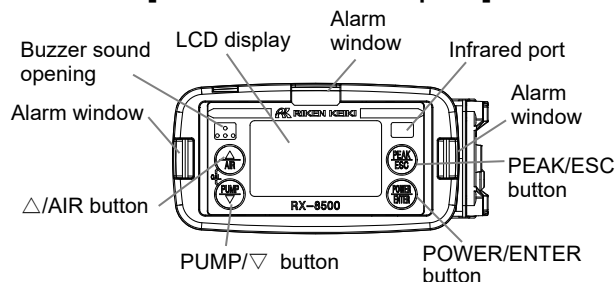


Usage

1. Turning the power on

Hold down the **POWER/ENTER** button (three seconds or more) until the buzzer beeps to turn the power on. When "Filter Probe" is displayed, check that the filter tube is connected and press the **ENTER** button. The buzzer beeps twice and then the measurement screen is displayed.

[Names of each part]

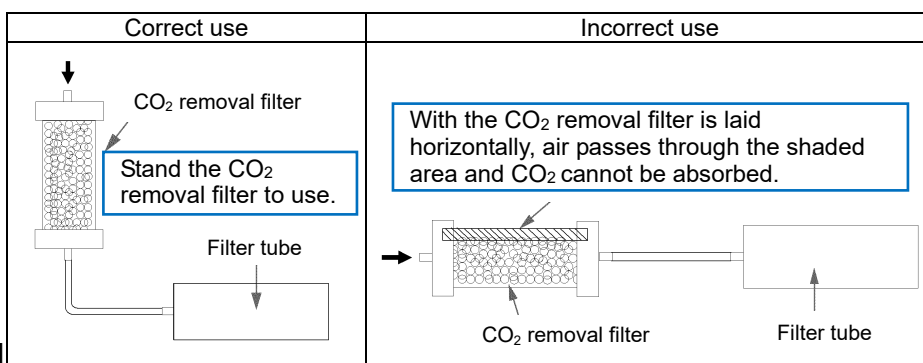


2. Performing air calibration

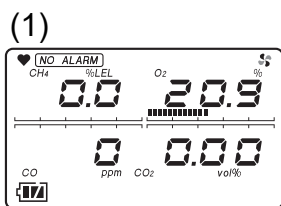
When performing air calibration in atmosphere, check the atmosphere for freshness before starting. Before performing air calibration, attach the CO₂ removal filter and draw air for at least one minute.

[Attaching the CO₂ removal filter]

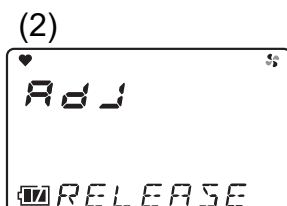
Attach the CO₂ removal filter so that the arrow (→) on the side is facing the filter tube. Stand the CO₂ removal filter to use.



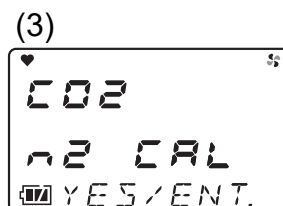
[Air calibration procedure screen]



Press and hold the **AIR** button on the measurement screen.



Release your finger from the **AIR** button when the screen above is displayed.



Attach the CO₂ removal filter and press the **ENTER** button.

When air calibration is completed, Adj is displayed on the screen.

3. Performing measurements

Measure the gas concentration from the measurement screen. Put the gas sampling probe close to the measurement area.

Once gas concentration measurement starts, the gas monitor draws in measuring gas for a certain period of time and then displays a concentration value as the measurement result.

4. Turning the power off

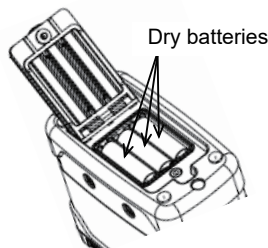
Press and hold the **POWER/ENTER** button until the buzzer beeps three times and the LCD display turns off.

Usage

5. Replacing/charging the battery

[Dry battery unit]

Use a flathead screwdriver or similar tool to open the battery cover on the bottom of the main unit, and replace the three dry batteries with new ones.



Dry batteries

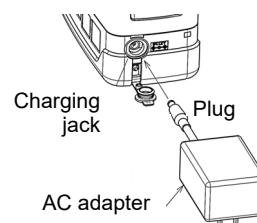


Danger

Replace the dry battery unit and dry batteries, or charge the Li-ion battery unit in a safe place.

[Li-ion battery unit]

Insert the AC adapter plug into the charging jack on the side of the battery unit to charge the battery.



Charging jack

Plug

AC adapter

Troubleshooting

Symptoms	Causes	Actions
<u>The power cannot be turned on.</u>	The battery level is too low.	(1) Dry battery unit: Replace all the three dry batteries with new ones in a safe place. (2) Li-ion battery unit: Charge the battery unit in a safe place.
	Improper installation of the battery unit.	Check whether the battery unit is properly attached to the main unit.
<u>Abnormal operations.</u>	Disturbances by sudden surge noise, etc.	Turn off the power once and then turn it on again (restart).
<u>Cannot operate the gas monitor.</u>	Disturbances by sudden surge noise, etc.	Remove the battery unit in a safe place. Then reinstall it and turn on the power to perform operations.
<u>System abnormalities</u> [FAIL SYSTEM]	A main unit circuit abnormality occurred.	Contact your sales outlet or closest RIKEN KEIKI dealer to request repairs.
<u>Sensor abnormalities</u> [FAIL SENSOR]	A sensor has failed.	Contact your sales outlet or closest RIKEN KEIKI dealer to replace the sensor. (If [FAIL] is displayed at power-on, the alarm can be reset by pressing the [ESC] button. The unit can continue being used for other gases using sensors other than the failed one.)
<u>A low battery voltage alarm is displayed.</u> [FAIL BATTERY]	The battery level is low.	(1) Dry battery unit: Turn off the power and replace the dry batteries with new ones in a safe place. (2) Li-ion battery unit: Turn off the power and charge it in a safe place.
<u>A low flow rate alarm is displayed.</u> [FAIL LOW FLOW]	Water, oil or the like has been drawn in.	Check the gas sampling hose for any damage or traces of drawn water, oil, etc.
	The gas sampling hose is clogged.	Check the gas sampling hose connections, clogging, twisting, etc.
	The pump has deteriorated.	Contact your sales outlet or closest RIKEN KEIKI dealer to replace the pump.
<u>Air calibration impossible</u> [FAIL AIR CAL]	Fresh air is not supplied around the gas monitor.	Draw fresh air properly and perform air calibration again.
<u>The reading rises (drops) and remains.</u>	Drifting of sensor output.	Perform the air calibration.
	Presence of interference gas.	Check if any interference gas such as solvent is present, and take measures properly.
	Slow leak.	A very small amount of the gas to be measured may be leaking (slow leak). Ignoring this may result in a dangerous situation, so take the same actions and measures as those when a gas alarm occurs.
	Environmental changes.	Perform the air calibration. In particular, the oxygen sensor is affected by the air pressure.

This troubleshooting chart is to be used as a simple guide for identifying the causes of common malfunctions. Contact your sales outlet or closest RIKEN KEIKI dealer if your gas monitor is experiencing symptoms not listed here, or if symptoms remain unresolved even after taking these actions.

Make sure to inspect your gas monitor once a year or more frequently, to ensure that performance is maintained.

Note: Refer to the operating manual for more details.

RIKEN KEIKI Co., Ltd.