# PTOE-1700 RIKEN KEIKI SP-220 (TYPE M/L/ML) Quick Operating Manual

#### Daily Maintenance

- 1. Check the battery level.
- 2. Check to confirm that filters are not dirty or clogged.

#### Part Names



## Battery Replacement

- 1. Confirm that the power for the product is turned off.
- 2. Turn the locking plate counterclockwise to open the battery cover.
- 3. Remove the old batteries and insert new batteries. Note the polarity.
- 4. Close the battery cover and turn the locking plate clockwise to lock.





Battery polarity indications



Rear of main unit (without rubber protection cover)

## Basic Operations

#### 1. Startup

To turn on the power, hold down the **POWER** button (for at least 1 second) until the buzzer blips once.

#### 2. AIR calibration (must be performed before measurement)

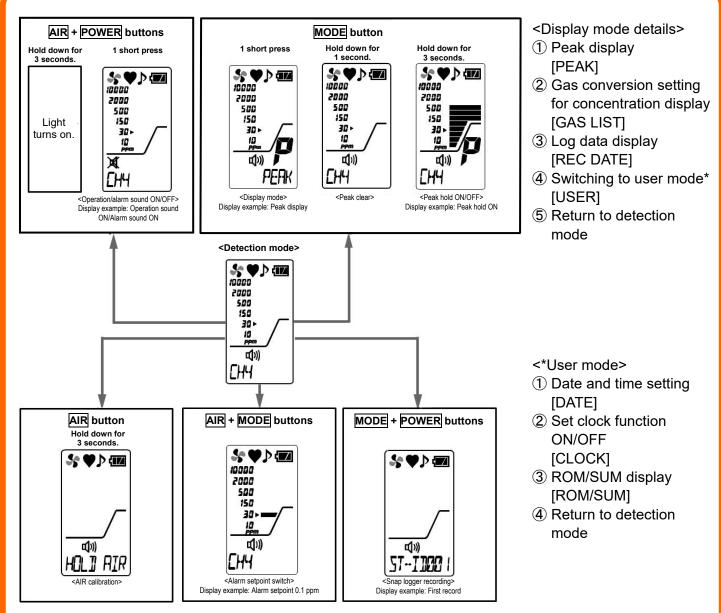
In detection mode in an environment with fresh air, hold down the AIR button, then release the AIR button when the display changes from "HOLD AIR" to "RELEASE" (the buzzer will sound three times: blip, blip, blip).

Note: For more information, please refer to the Operating Manual.

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## **Fault Alarm Descriptions**

The detection of an abnormality in the product will trigger a fault alarm. A buzzer will sound and alarm lamps will flash to indicate the fault alarm. (Refer to the table at right for the fault display.) Resolve the cause of the low flow rate and restore the flow rate. This alarm can then be cleared by pressing the MODE button.



| Details                    | LCD display   |
|----------------------------|---------------|
| System abnormality         | FAIL SYSTEM   |
| Calibration<br>abnormality | FAIL AIR CAL  |
| Low flow rate              | FAIL LOW FLOW |
| Sensor abnormality         | FAIL SENSOR   |
| Low battery voltage        | FAIL BATTERY  |
| Clock abnormality          | FAIL CLOCK    |
| Pump abnormality           | FAIL PUMP     |

Fault alarm display example: Low flow rate

Note: For more information, please refer to the Operating Manual.

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