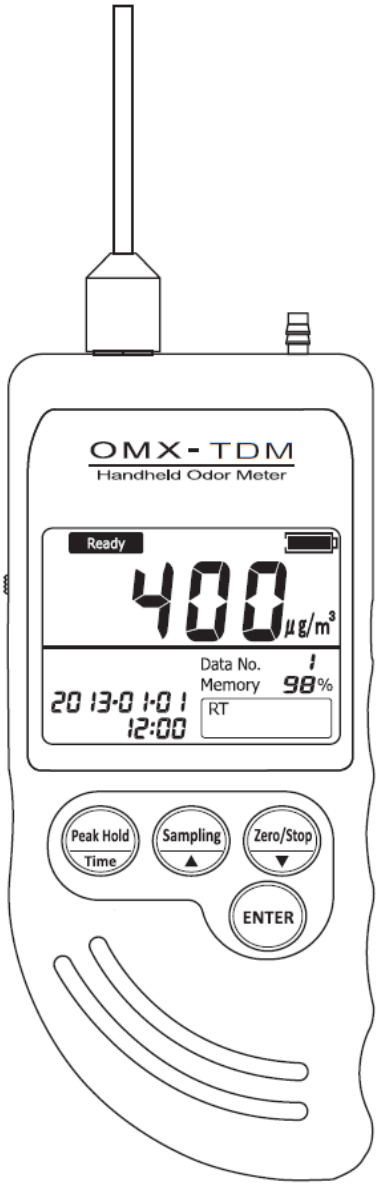
KANOMAX
The Ultimate Measurements



Handheld Odor Meter

OMX-TDM

Operation Manual

Ver. 2
20160719

KANOMAX
The Ultimate Measurements

Table of Contents

1. Introduction 4

1-1. Supplied Components List 4

1-2. Warning 5

1-3. Cautions 6

1-4. Unit Dimension 7

2. General Description 8

2-1. Features 9

2-1-1. LCD Display 9

2-1-2. Base Unit 10

2-2. Accessories 11

3. Measurement 12

3-1. Real-time Sampling Mode 12

3-1-1. Measurement Preparation 12

3-1-2. Measurement 13

3-2. Memory Sampling Mode 13

3-2-1. Measurement Preparation 13

3-2-2. Measurement 13

3-2-3. Memory Overflow 14

3-3. Peak-hold Function 15

3-4. Zero-point Function 15

4. Data Filing Software 16

4-1. How to Download Software 16

4-2. How to Install Software 16

How to Install USD Drivers Software **17**

4-3. Preparation 18

4-4. Open Software 18

5. Specification 19

6. Maintenance and Servicing 20

6-1. Replacement of "AA" Alkaline Batteries 20

6-2. Replacement of Button Battery 20

6-3. Maintenance of Air Purifying Unit 21

6-4. Replacement of Filter for Suction Nozzle 21

6-5. Troubleshooting 22

1. Introduction

1-1. Supplied Components List

Thank you for purchasing of Shinyei Handheld Odor Meter.
Handheld Odor Meter is packaged carefully and includes all the components necessary for full operation.
Upon receipt, check the contents and find you received the items as below in good condition.

The instrument kit contains:

Name	Q'ty
OMX-TDM Base Unit	1
Suction Nozzle	1
AC Adaptor	1
'AA' Alkaline Battery	4
USB Connection Cable	1
Air Purifying Unit	1
Activated Carbon (50cc/bag)	1
Replacement Filter for Air Purifying Unit	4
Replacement Filter for Suction Nozzle	5
Operation Manual	1

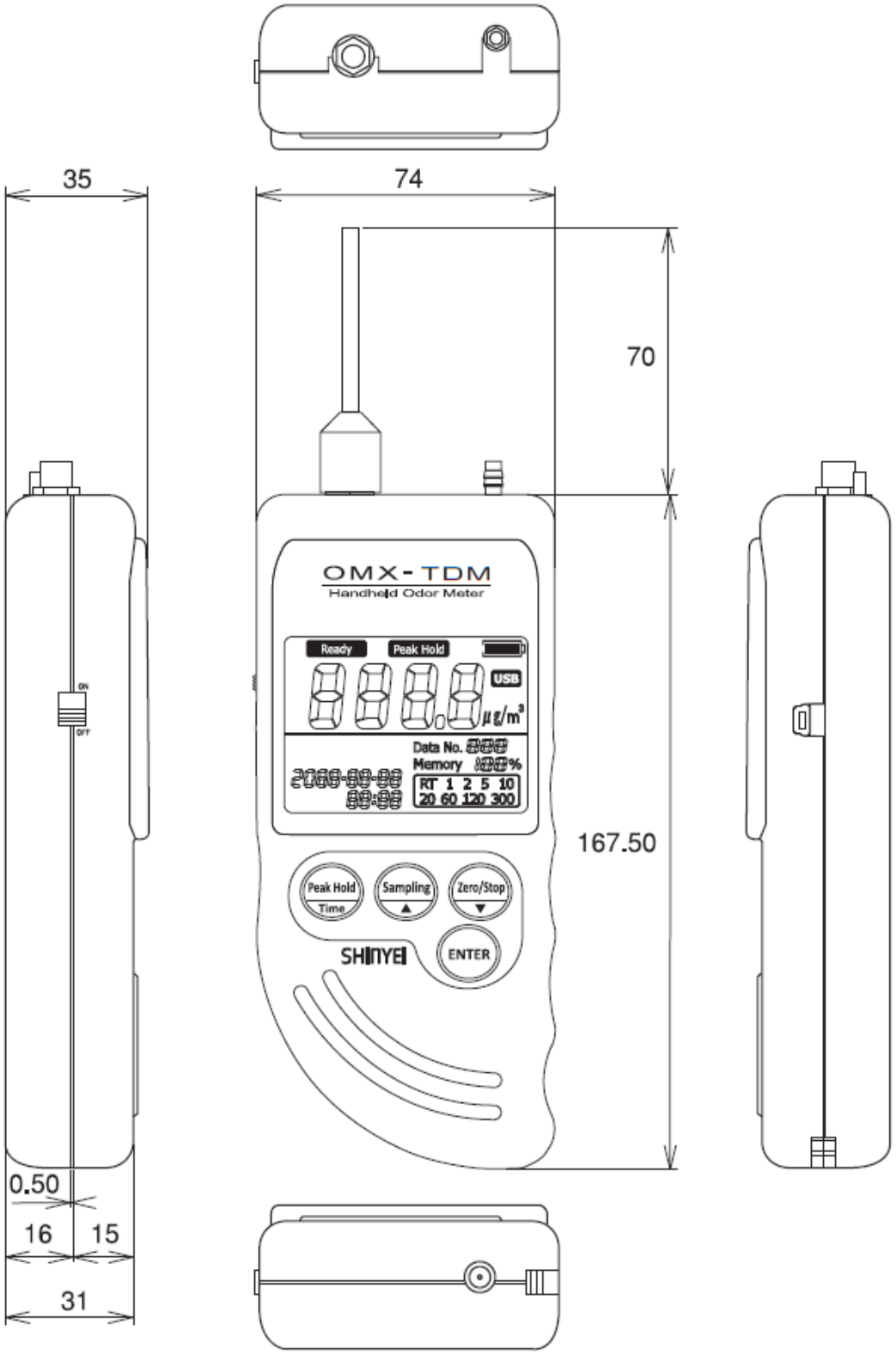
1-2. Warning

Warning
● Do not use any adaptors except supplied original AC adaptor. ● Do not use in explosive atmosphere. ● Do not use the device where combustible and/or explosive gasses exist. The device is not designed for explosion proof. ● Do not dismantle the base unit.

1-3. Cautions

Cautions
● **Do not install, use, or store the unit at a place where:** - Ambient temperature is not in the range of -10 to 40 degree in C. (14 to 104 degree in F) - Ambient humidity exceeds 90%R.H. - Condensation occurs due to rapid temperature change. - Corrosive and/or explosive gases exist. - Direct vibration and/or stream occur. - Mush dust, salty materials, and/or iron powders exist. - Static electrons, magnetic, and/or electronic noise occur. - Cool or warm air from conditioners influences directly. - The unit is exposed to direct sunlight. - Heating occurs due to heat radiation. ● **Do not use or store the unit at a place where the following gases exist:** - Extremely concentrated odor. - Cigarette smoke and/or oil mist. - Silicon compound gas included in hair spray, adhesive, and silicon rubber etc. - High concentrated chloride, acidic substances, corrosive gas, and chlorofluorocarbon etc. ● **Exchange new batteries if battery status displays “Low.”** ● **Do not use rechargeable batteries.** ● **Do not use liquid such as benzene and/or thinner to clean the unit surface.** ● **Do not block suction nozzle and/or exhaust nozzle.**

1-4. Unit Dimension



Unit: mm

2. General Description

Handheld Odor Meter is the most popular simplified tool for odor analysis enables to show TVOC in the value corresponding to toluene gas numerically by comparing odor gases and purified air.
The reading shown on the display is calculated based on our original principle.

With the installation of data filing software, measured data can be transferred to PC in easy steps.

The Value Corresponding to Toluene Gas

Simply turn on the unit and start measurement.
Real-time TVOC gas concentration corresponding to toluene gas can be measured continuously.

Peak-hold

Retains maximum gas concentration.

Memory Sampling Measurement Mode

Up to 511 measuring data can be saved upon selecting sampling rate.

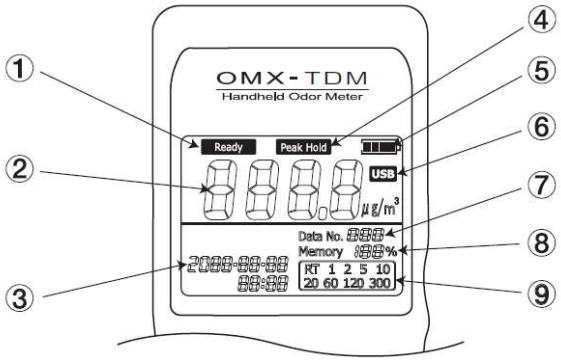
Data Filing Software

By using original data filing software, measuring data from the unit can be transferred to PC.

To download the latest data filing software, visit the link as below.
http://www.kanomax-usa.com/product/handheld-odor-monitor-model-omx/

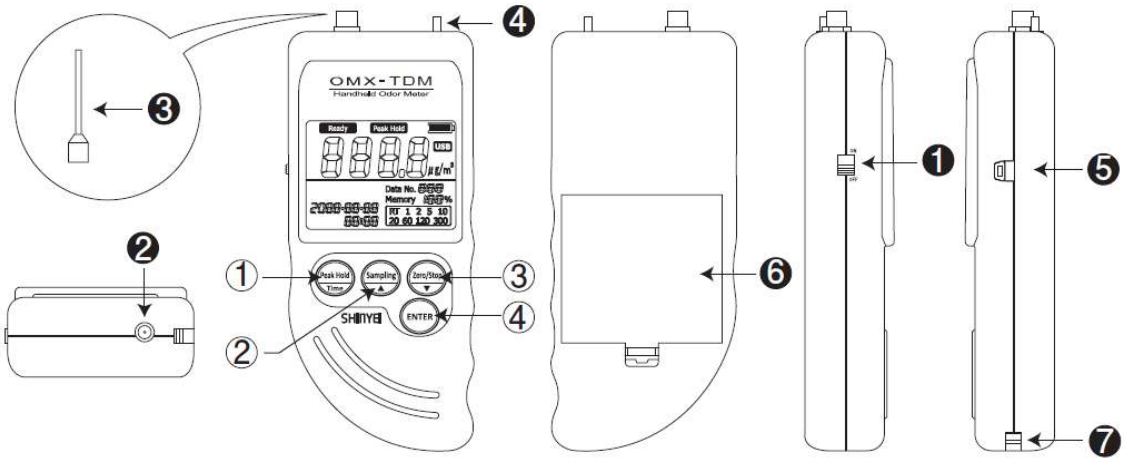
2-1. Features

2-1-1. LCD Display



No.	Name	Function
①	Ready	Blinks for about 10min for initializing when the unit is turned on. Start measuring when it stops blinking.
②	TVOC gas concentration corresponding to toluene gas	Displays TVOC gas concentration corresponding to toluene gas from 0 to 9999 in μg/m³.
③	Calendar Function	Upper: Year-Month-Date Lower: Hour-Time
④	Peak Hold	Retains maximum gas concentration.
⑤	Battery Status	■■■■ Full ■■■□ Good – Measureable for 3 to 4 hours approx. ■■□□ Moderate – Measureable for 1 to 2 hours approx. ■□□□ Low – Change battery immediately. □□□□ No battery.
⑥	USB	USB Cable is connected.
⑦	Data No.	Shows number of saved data.
⑧	Memory	Displays remaining memory capacity.
⑨	Sampling Rate	Select sampling rate. NOTE "RT" refers to Real-time Sampling that measures gas every 1 second continuously.

2-1-2. Base Unit



No.	Name	Function
①	Peak Hold / Time	● Hold 3 seconds for “peak-hold function”. (See 3-3.) ● Hold and turn on the device at the same time to set calendar.
②	Sampling ▲	● Select sampling rate. (See 3-2.) ● Set calendar.
③	Zero/Stop ▼	● Use for “zero-point function". (See 3-4.) ● Set calendar.
④	ENTER	Confirm sampling rate and/or “zero-point” function.
❶	Power Switch	Turn on/off the unit.
❷	AC Adaptor Port	Connect AC adaptor if necessary.
❸	Suction Nozzle	Takes sampling air and/or object gases.
❹	Exhaust Nozzle	Exhaust sampling air and/or object gases.
❺	USB Port	Connect attached USB cable for PC connection.
❻	Battery Box	Open/Close to replace batteries.
❼	Hook Pin	Use for straps.

Calendar Settings

1. Hold Peak Hold / Time and turn on the device at the same time to set calendar.
2. When “Year” is blinking, change to the arbitrary number.
3. Press ENTER to confirm the settings.
4. Repeat 2. And 3. To set month, date, house, and minute.

2-2. Accessories

Name	Function
AC Adaptor	Connect to the unit during the measurement if necessary.
Air Purifying Unit	Attach to the unit for “zero-point function”. (See 3-4.)
Activated Carbon	Exchange activated carbon when deodorization using air purifying unit is not effective.
Replacement Filter for Air Purifying Unit	Replace filter when deodorization using air purifying unit is not effective.
Replacement Filter for Suction Nozzle	Replace filter when gets dirt.
USB Connection Cable	Use to transfer measuring data from the unit to PC.

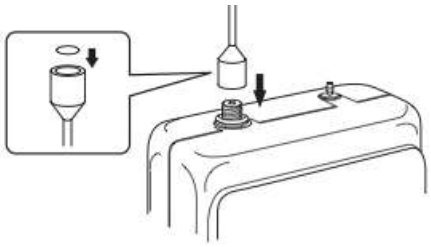
3. Measurement

3-1. Real-time Sampling Mode

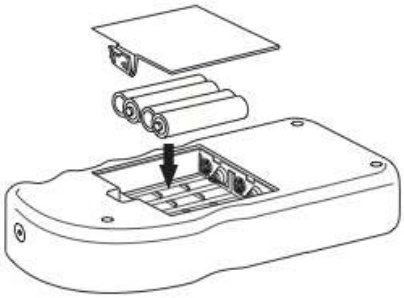
3-1-1. Measurement Preparation

1. Place filter to suction nozzle.

2. Attach suction nozzle to the unit before measurement.



3. Use “AA” alkaline batteries or AC adaptor.



or

4. Turn on the unit at clean ambient.

   It takes about 10 min for the unit initializing and start measuring.

   NOTE The unit sets “zero” point when the initializing is done.

   NOTE To get the zero point stable, initializing at clean environment is recommended.

   NOTE To get “Zero” point forcibly, use air purifying unit. (See 3-4.)

3-1-2. Measurement

1. Turn on the unit and wait for about 10 minutes until “Ready” stop blinking and the initializing is done.

2. Start measuring.

3. Use data filing software if necessary.

4. Turn off the unit when odor strength shows close to “0”.

3-2. Memory Sampling Mode

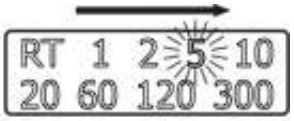
3-2-1. Measurement Preparation

Refer to Page. 11.

3-2-2. Measurement

1. Turn on the unit and wait for about 10 minutes until “Ready” stop blinking and the initializing is done.
2. Press

until sampling rate on LCD display starts blinking.
3. Select sampling rate by pressing.



4. Press

to finish selecting sampling rate.
5. Press

(one time) and

(twice) to save data.

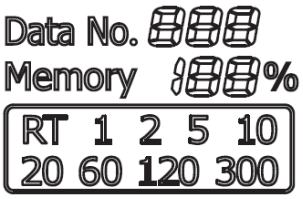
3-2-3. Memory Overflow

Memory overflow occurs when the internal memory is full.

If there is no space remained, calendar on LCD display starts blinking and data number becomes "0".

To delete saved memory, press Sampling ▲ and Zero/Stop ▼ at the same time while the unit is turned off.

Keep pressing Sampling ▲ and Zero/Stop ▼ and turn on the device.



NOTE Saved memory in the unit will not be deleted automatically when it is transferred to PC.

3-3. Peak-hold Function

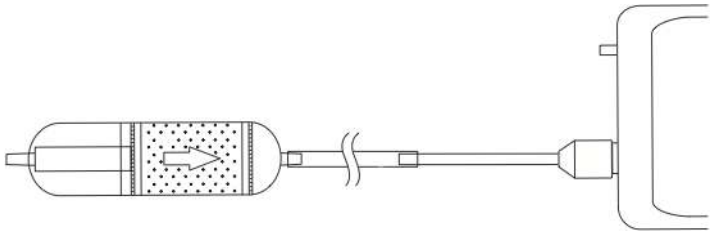
Press Peak Hold Time for over 3 seconds during Real-time sampling.
By using this function, the highest value of odor strength keeps being displayed until the unit measures higher value.

NOTE Press Peak Hold Time for over 3 seconds again to cancel the function.

NOTE The function is not displayed on the saved data.

3-4. Zero-point Function

By using this function, the unit sets the baseline accurately when it is turned on.
The unit sets the baseline at the place where the initialization is done.
After 10 minutes initializing, the unit will display Odor Strength “0” (baseline) automatically regardless of the measurement environment.
If you need to set the baseline accurately, connect Air Purifying Unit to purify the air forcibly.



1. Press Zero/Stop until calendar on LCD display “0” and starts blinking.
2. Press ENTER to proceed, or press Zero/Stop to cancel.

4. Data Filing Software

Data filing software is used to transfer data from the unit to PC by using USB connection cable.

4-1. How to Download Software

Download the latest software from the link as below.

http://www.kanomax-usa.com/product/handheld-odor-monitor-model-omx/

NOTE Register personal information in order to download the file.

4-2. How to Install Software

Open “SetupTDM_en.msi” and follow the instruction on the window.

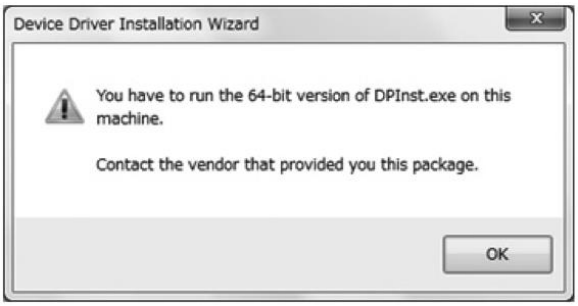
NOTE Install software under Windows administrative privileges.

How to Install USD Drivers Software

Install USB Drivers software before connecting USB cable to PC.

1. Download the latest software from the link as below.
   https://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx

2. Install the software.
   NOTE If PC CPU is 32bit, select "CP210xVCPInstaler_x86.exe".
   If CPU is 64bit, select "CP210xVCPInstaler_x64.exe".
   NOTE Warning message appears if incorrect file is selected.

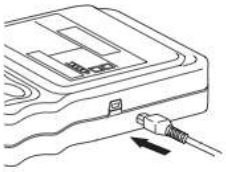


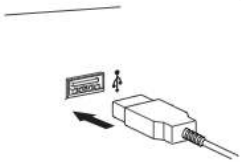
3. Confirm Device Manager displays "Silicon Labs CP210x USB to UART Bridge (COM)" after the installation.

4. Confirm assigned COM number.

4-3. Preparation

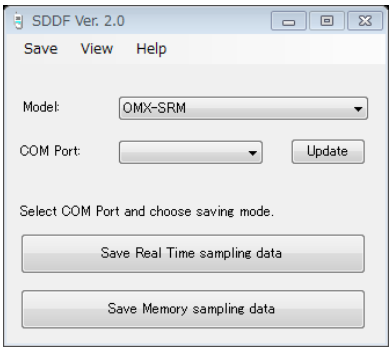
Connect the unit to PC by USB connection cable.





4-4. Open Software

1. Double-click shortcut icon on desktop, or open the file from program files.
2. Confirm main screen appears.



3. Read “Handheld Odor Meter Data Filing Software Manual” for details.

5. Specification

Detection Method	Semiconductor gas sensors
Object Gas	TVOC, etc.
Sampling Method	Continuous sampling by built-in pump
Detection Range	TVOC gas concentration corresponding to toluene gas from 0 to 9999 in μg/m^3.
Display	Digital LCD display
	0 to 9999 in μg/m^3
Response Time	Toluene (500μg/m^3): Reaches 90% responsiveness within 40 seconds
	Toluene (1500μg/m^3): Reaches 90% responsiveness within 60 seconds
	Toluene (6000μg/m^3): Reaches 90% responsiveness within 60 seconds
Power Source	2 “AA” alkaline batteries or AC adaptor
Consumed Power	1,100mW approx. with “AA” alkaline batteries
Storage Temp. Range	0 to 40 degree in C
Dimensions	74(W) x 167.50(L) x 35(D)
Memory	32,732 data or 511 files

6. Maintenance and Servicing

6-1. Replacement of "AA" Alkaline Batteries

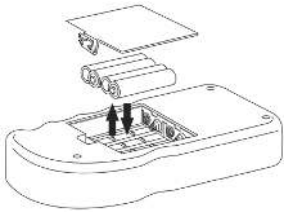
Replace "AA" alkaline batteries when battery status on LCD display becomes "Low".

6-2. Replacement of Button Battery

The unit uses a button battery (model: CR2032) for memory back up.

When to replace:

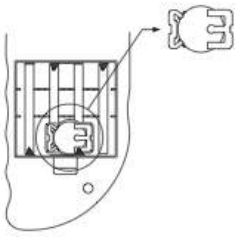
- Pasts 5 years approx. after purchasing.
- Confirms when calendar or time on LCD display is incorrect.



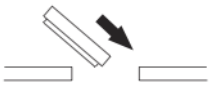
1. Turn of the unit and remove "AA" alkaline batteries.
   NOTE Do not connect AC adaptor.

2. Push the round part of button battery firmly until the left part of button battery moves up.

3. Take out the battery.
   NOTE Do not use metal tools or easily broken stools like screwdrivers or pencils.

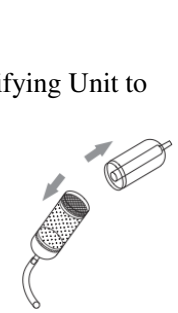


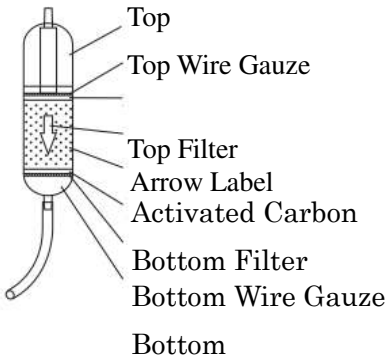
4. Insert the new battery.



6-3. Maintenance of Air Purifying Unit

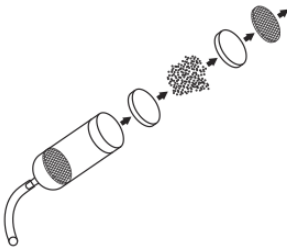
Replace activated carbon and filters in Air Purifying Unit to prevent gases absorbed in the unit.





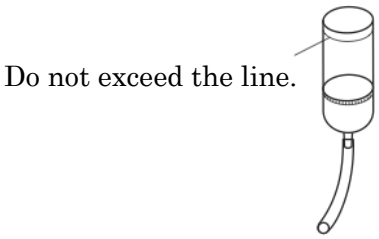
1. Twist the Air Purifying Unit to open.

2. Take out top wire gauze, top filter, activated carbon, and bottom filter.
   NOTE Do not take out bottom wire gauze.



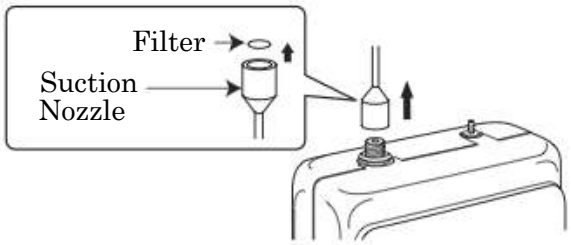
3. Replace bottom filter and fill in activated carbon up to the line.
   NOTE Do not exceed the line when replace activated carbon.

4. Replace top filter and top wire gauze.



6-4. Replacement of Filter for Suction Nozzle

Twist Suction Nozzle and replace filter if necessary.



6-5. Troubleshooting

	If you find:	Check:
①	The unit does not operate.	Check battery status or connect AC adaptor.
		Check battery polarity.
②	Odor Strength does not change.	Close the unit to object.
		Connect Air Purifying Unit to clean the absorbed gas in the unit.
③	Odor Strength on LCD display keeps blinking.	Odor concentration is too high and overflowed. Change display range or try to lower the gas concentration.
④	Time on LCD display keeps blinking.	Memory is overflowed. Delete data.
⑤	Sampling rate cannot be selected.	Memory is overflowed. Delete data.
⑥	Data # becomes “0”.	Memory is overflowed. Delete data.
⑦	“SErr” is shown on LCD display.	Sensor malfunction. Contact us of the message keeps being displayed.
⑧	“PErr” is shown on LCD display.	Built-in pump malfunction. Contact us of the message keeps being displayed.

KANOMAX USA Inc.
219 US HWY 206
ANDOVER, NJ 07821
www.kanomax-usa.com
973-786-6386