

# SOTO-B1 AIR PURIFIER

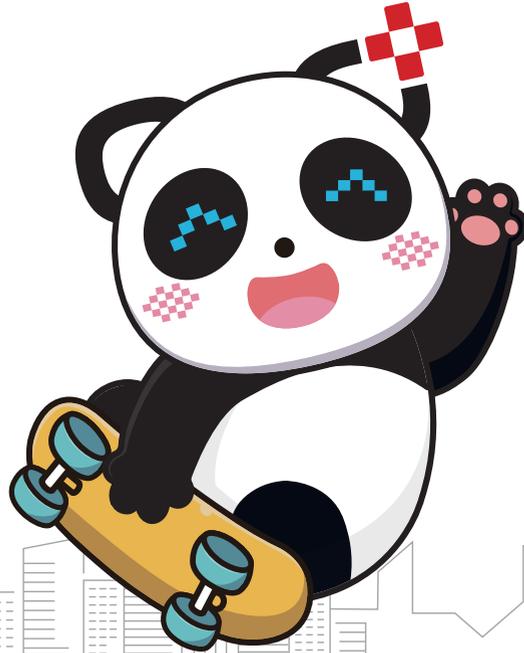
WALL MOUNTED

## Operation Manual

Before operating the system, please read this manual thoroughly, and retain it for future reference.



*If you have the opportunity to experience SOTO air purifiers, please remember that they are designed with our dreams to meet your expectations...*



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## Consumer Limited Warranty

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### Congratulations on your investment

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SOTO gives you the following limited warranty for this product only if it was originally purchased from SOTO or from an authorized dealer.

SOTO warrants that this product is free, under normal use and maintenance, from any defects in material and workmanship. If any such defects should be found in this product within the applicable warranty period. SOTO shall, at its option, repair or replace the product as specified herein.

SOTO will repair or replace, free of charge, to the original purchaser, any part that is found to be defective in material or workmanship within one (1) year of the date of purchase. This limited warranty does not cover there placement of expendable or consumable parts such as filters or UV lamps, and other parts subject to normal wear unless they are defective in material or workmanship.

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### This warranty shall not apply if:

1. Any defects caused or repairs required because of abusive operation, negligence, accident, improper installation or inappropriate use as outlined in the operation manual.
2. Any product tampered with modified, adjusted or repaired by any party other than SOTO.
3. Damaged caused or repairs because of the use with items not specified or approved by SOTO.
4. Any damage caused by external or environmental conditions (such as a fire or an earthquake), including but not limited to the use of voltage other than indicated on the product.
5. The content on the warranty card is inconsistent with the product, or there is no valid evidence to prove that the defective product is provided by SOTO.

## Safety Precautions

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To reduce the risk of electrical shock, fire or injury to person(s) read the following:

### Running Environment Cautions

- Use only a 220-240 volt outlet with grounding wire receptacle.
- Do not use the unit in an enclosed space where oxygen, flammable, explosive or toxic vapors are given off by oil base paint, paint thinner, some moth proofing substances. It may cause explosion or fire.
- The product cannot be used in high-temperature, wet or watery places. Best working condition is 0-40°C and relative humidity of < 75%.

### Unit Operation

- Do not operate the unit without filters. Make sure remove plastic packaging from all the filters before operation.
- Do not use the unit if the power cord or plug is damaged or the connection to the wall outlet is loose.
- When removing the power plug, always hold the plug and never pull by the cord.
- Do not handle plug or appliance with wet hands. Electrical shock or fire from short circuit may occur.
- To avoid causing fire do not attempt to disassemble the unit - only certified technicians should do this.
- Stop the unit and unplug the power when maintenance.
- Do not insert fingers or foreign objects into the intake or air outlet.
- Keep hair, loose clothing, fingers and all parts of body away from openings and moving parts.
- Do not use the unit near or on hot objects, such as range or where it may be exposed to steam.
- Do not wipe the outside, inside or any parts of the unit with flammable substances, it may cause fire!
- Do not wash or reuse the HEPA filter and Activated carbon filter.
- Photo catalytic is permanent, never needs replacing. When there is dust on it, clean the dust off using a vacuum cleaner dusting brush. Do not wash it in water.

## How it Works

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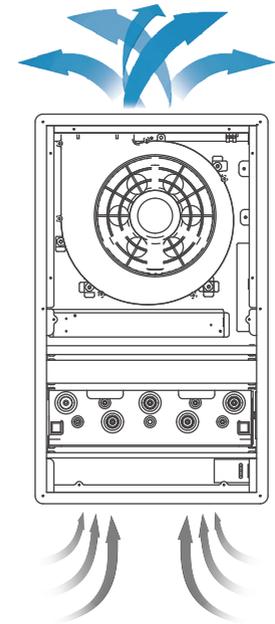
The air purifier functions as an air cleaner by helping to disinfect airborne microorganisms and removing particulates from the air. The DC fan of the unit draw air through the bottom (Intake) of the unit. Then it passes through the Pre-filter, Electronic cell, HEPA filter, Activated carbon filter and UV lamp + Photo catalytic filter. The purified air is then released through the outlet on the top of the unit. The Negative Ion Generators near the air outlet releases revitalizing negative ions into the air to refresh the air.

### 🌀 The air is cleansed in seven stages.

1. The Pre-filter traps large dust particles.
2. The two-stage Electronic cell (Electrostatic adsorption device) captures airborne particles, as small as 0.01 microns.
3. The high efficiency HEPA filter removes microscopic particles in the air.
4. The activated carbon filter will absorb odors and gases.
5. The UV lamp kill bacteria and viral microorganisms such as influenza, TB and Legionnaire's Disease as well as other harmful contaminants.
6. When UV light hits the photo catalytic filter, it creates e- and h+, which have an excellent effect in the decomposition of odors.
7. The unit also generates negative ions that freshens the room air.

### ☼ Sterilization Factor

1. The UV radiation destroys the DNA structure of bacteria and kills pathogenic microorganisms.
2. The UV ray wavelength is 254 nm, and the average intensity of UV ray irradiation is between  $166.1\mu\text{W}/\text{cm}^2 \sim 167.8\mu\text{W}/\text{cm}^2$  at a position 1m below the UV lamp.



## Features and Specifications

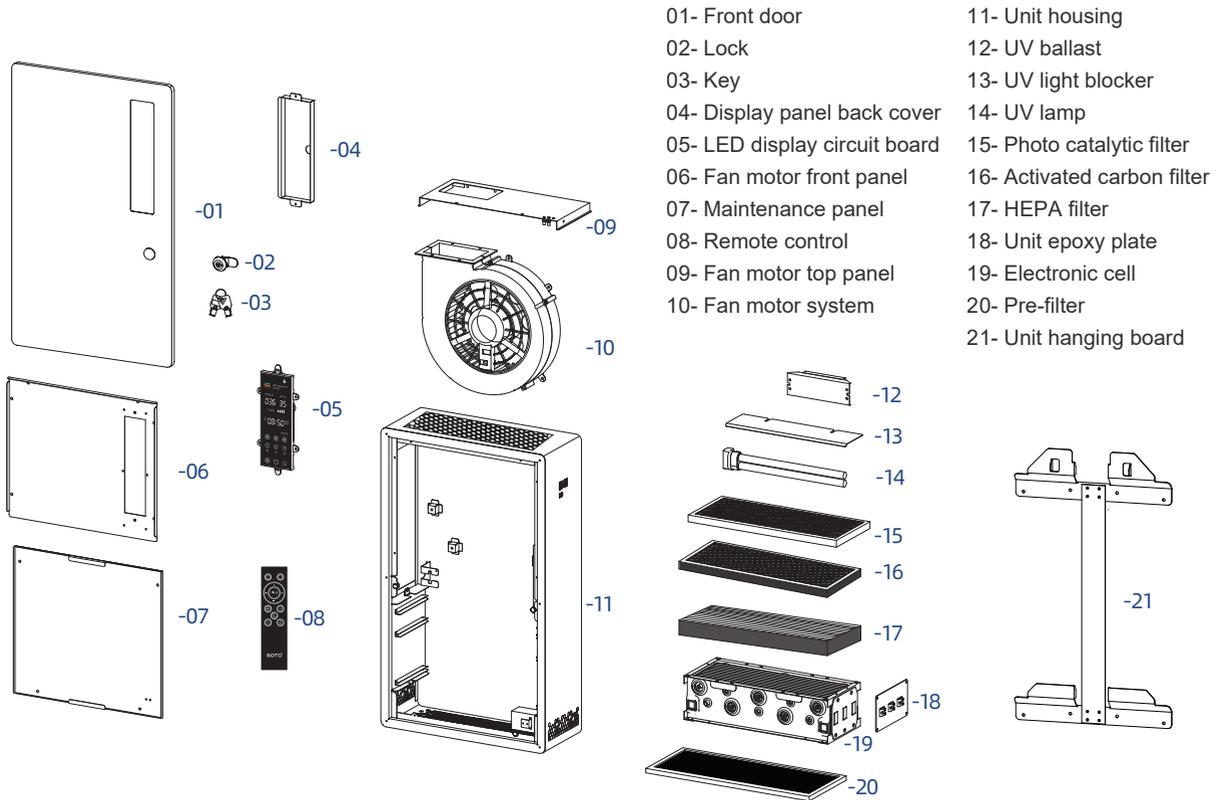
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The unit has a Pre-filter (traps large dust particles), Electronic cell (remove particles), HEPA Filter (remove particles), Activated Carbon Filter (absorbs odors and gases), UV-C+ Lamp + Photo catalytic Nano-TiO<sub>2</sub> filter (killing airborne pathogen) and Negative Ion generator (revitalize and refresh the air).

1. The odor and particle sensor can let the unit automatically select the appropriate fan speed depending on the air quality detected.
2. The indicator lights tell you when to clean the electronic cell, replace the HEPA filter and the Activated carbon filter or the UV lamp.
3. When the filters need to be replaced, simply open the front door and take off the maintenance panel, then pull out the filters and replace a new one in. No screws, hooks or tools are required.

|                   |                                    |
|-------------------|------------------------------------|
| Model             | SOTO-B1 (BK90)                     |
| Power Requirement | 220-240V~, 50/60Hz                 |
| Rated Power       | 78W                                |
| Negative Ion      | 3x10 <sup>6</sup> /cm <sup>3</sup> |
| UV Lamp           | 24W                                |
| Dimensions        | 45cmx75cmxD19.5cm                  |
| Weight            | 19.5kg                             |

# Part Name



## Installation

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1. Power supply condition: Use only a 220-240 volt outlet with grounding wire receptacle.
2. Environmental conditions: Temperature: 0°C~40°C; Relative humidity: <75%.
3. This product should be installed on the wall near the less activity of indoor personnel. It must be installed on the wall of the load-bearing wall, otherwise it will cause the unit to fall and harm the human body.

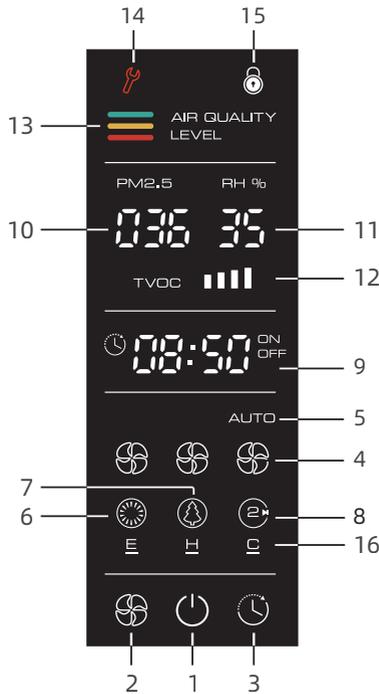
### Applicable places and Operation

1. This product is used for indoor sterilization in manned environment. It cannot to be used in the environment with inflammable and explosive gases.
2. This product satisfying the requirements of the China "General Hygienic Requirements for Air Sterilizer". Turn on the unit, UV lamp and negative ion on, operate it for 2h at high speed in a 90m<sup>3</sup> space. Three repeated tests have all achieved the natural bacteria extinction rate of more than 90% for indoor air.

### Before operation

1. Select the wall near the room where people have less activity, and use the impact drill to drill holes on the load-bearing wall according to the hole position on the unit hanging board.
2. Use expansion bolts and self tapping screws to firmly fix the unit hanging board. Fix with at least 4 more screw holes on the hanging board (2 on top and 2 on bottom).
3. Carefully hang the unit on the upper and lower hooks of the hanging board. Pull the unit down with both hands to check whether the unit is firmly hung on the hook.
4. Plug the power cord of the unit into a nearby power outlet.
5. Prior to using unit for the first time, you must remove the plastic bag from the HEPA filter and the Activated carbon filter inside the unit.

# Operation 1



## Button operation and Display indicator lights

### 1 POWER Button

- Turns the unit On and Off.
- Hold the button for 2 seconds, the “🔒” indicator light will light up with beeping. In this mode, the panel is locked. If you want to return to the default mode, do the reverse.

### 2 SPEED Button

- When this button is pressed the airflow rate changes as shown below:  
L-- M -- H -- Auto...

### 3 TIMER Button

- Press this button to select the time for operation. The timer setting switches as shown: 1 -- 2 -- 4 -- C (timer cycle function) -- cancel timing.

### 4 SPEED indicator lights

### 5 AUTO mode indicator light

- When the indicator is lighting up, the unit is at Auto mode: the unit will operate on low speed and will adjust speeds accordingly base on what pollution the sensors pick up in the air.

### 6 UV LAMP indicator light

- The indicator light will light up when the UV light is on. When the indicator light flashes, it is time for the UV lamp to be replaced.

### 7 NEG.ION indicator light

- When the indicator light is on, negative ions are discharged.

## Operation 2

### 8 TIMER CYCLE indicator light

When this indicator is lighting up, the unit will start to work for 2 hours and stops 0.5 hour automatically, this schedule will repeat itself continuously while in this mode.

### 9 TIMER indicator light

- Displays the current clock time when the unit has no time set.
- When pressing the TIMER button on the display panel or the TIMER button on the remote control, the timing time is displayed, and the “🕒” indicator light is on.
- When the scheduled operation time is set, the “OFF” indicator will light up under the running state and display the shutdown time. When in the power off state, the “ON” indicator will light up and display the power on time.

### 10 PM2.5 display

Real-time display the indoor PM2.5 concentration ( $\mu\text{g}/\text{m}^3$ ).

### 11 Indoor humidity display

### 12 Indoor TVOC pollution level display

### 13 Pollutant level display (See the chart)

The different colors indicate the air quality:

Green=Good, Orange=Unhealthy, Red=Hazardous



| Indicator | PM2.5                                | TVOC Level | Speed |
|-----------|--------------------------------------|------------|-------|
| Green     | $\leq 75 \mu\text{g}/\text{m}^3$     | ■ ~ ■■     | L     |
| Orange    | $76 \sim 150 \mu\text{g}/\text{m}^3$ | ■■■ ~ ■■■■ | M     |
| Red       | $> 150 \mu\text{g}/\text{m}^3$       |            | H     |

### 14 CHECK indicator light

When the indicator light flashes with beeping, please contact customer service.

### 15 LOCK FUNCTION indicator light

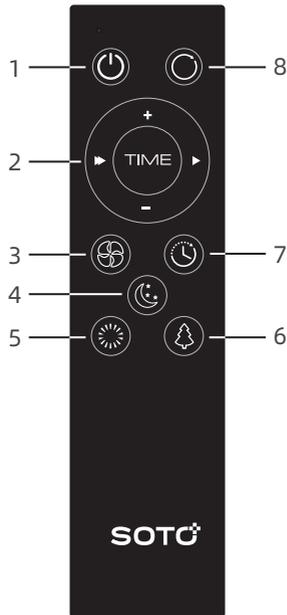
In this mode, all the buttons will not work.

### 16 FILTERS LIFE indicator lights (See the chart)

| Indicator | Instructions                                |
|-----------|---|
| ⏻         | Cleaning the Pre-filter and Electronic cell |
| ⏪         | Replacing the HEPA filter                   |
| ⏩         | Replacing the Activated carbon filter       |

## Operation 3

### Remote Control Operation



#### 7 TIMER Button

The set time switches every time the button is pressed as shown below: 1hr - 2hr - 4hr - Cycle - Cancel.

#### 8 RESET Button

Pressing the reset button 3 times will reset the replacement indicator lights.

#### 1 Power (ON/OFF) Button

The unit will start operating when the POWER button is pressed.

Pressing the button again will stop operation.

#### 2 Scheduled operation time Buttons

- The first time press the "TIME" button, the digital clock on the display panel is flashes, calibrate the current time by pressing the "+" or "-" buttons. Then press the "▶" button, the minute display starts flashing. Also calibrate the current minute by pressing the "+" or "-" buttons.
- Press the "TIME" button a second time, the "ON" indicator light on the display panel is light on. At this point, press the "+" or "-" buttons to set the start time of the unit through the same time setting method.
- Press the "TIME" button a third time, the "OFF" indicator light on the display panel is light on. At this point, according to the same time setting method, press the "+" or "-" buttons to set the unit shutdown time.
- Press the "▶" button to confirm the above time setting. At this time, the unit is turned on and off at the set time every day.

#### 3 SPEED Button

The fan speed can be switched among L- M- H- Auto settings.

#### 4 NIGHT Button

When pressed, all the indicator lights on the display panel will go out.

**5 UV-C+ LAMP Button:** Turns UV-C+ lights on and off.

**6 NEG.ION Button:** Turns Negative Ions on and off.

## Care and Maintenance 1

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To maintain optimum performance of this air purifier, the Pre-filter and Electronic cell need to be cleaned, and the HEPA filter, Activated carbon filter and the UV lamp need to be replaced.

### Warning

When maintenance on the unit, be sure to unplug the power cord, and never handle the plug with wet hands. If so, electrical shock and bodily injury may occur as a result.

### Main unit

Wipe with a dry, soft cloth for stubborn stains or dirt. Do not use volatile fluids, Benzene, paint thinner, polishing powder, this may damage the surface. Do not use detergents, detergent ingredients may damage the unit.

### Cleaning the Pre-filter and Electronic cell

When the “” indicator light on the control panel flashes, the Pre-filter and Electronic cell need to be cleaned.

1. Stop the operation and unplug the unit.
2. Rotate the door lock and pull the front door to the left.
3. Rotate the plastic holder to one side and take off the maintenance panel.
4. Gently pull out the pre-filter and electronic cell.
5. After cleaning the pre-filter and electronic cell, hold the SPEED button 3 seconds or the RESET button on the remote control 3 times to reset the indicator flashes.

Note: 1. Use a large enough container, such as a laundry tub or trash container. Dissolve detergent in warm water to cover the cell. After the detergent has completely dissolved, place the cell in the container. Allow the cell to soak for 15~30 minutes and rinse with clean water.

2. Dry the cell thoroughly with heat gun before reinstalling.

## Care and Maintenance 2

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### **Warning**

- DO NOT clean the pre-filter and electronic cell with alcohol, gasoline, paint thinner or other flammable substances. It may cause fire!
- DO NOT reinstall the cell until it is completely dry. If the “” indicator light on the control panel flashes, then the cell may still be wet.
- Be sure there is no detergent residue around the cell ceramic insulators, especially around the square shape ceramic insulators.

### Replacing the HEPA filter, Activated carbon filter and the UV lamp

When the “” indicator light on the control panel flashes, the HEPA filter needs to be replaced.

When the “” indicator light on the control panel flashes, the Activated carbon filter needs to be replaced.

When the “” indicator light on the control panel flashes, the UV lamp needs to be replaced.

1. Stop the operation and unplug the unit. Open the front door and take off the maintenance panel.
2. Hold the filter's handle, pull it toward to you, then pull out the HEPA filter and the activated carbon filter.
3. Remove the UV lamp blocker. Hold the UV lamp pull it toward and remove it from the lamp holder.
4. After replacing the HEPA filter activated carbon filter and the UV lamp, hold the SPEED button 3 seconds or the RESET button on the remote control 3 times to reset the indicator flashes.

### **Warning**

- DO NOT reuse or clean the HEPA filter and the carbon filter.
- DO NOT clean any parts of the unit with liquid, especially alcohol, gasoline, paint thinner, etc.
- Never look directly at UV lamps. Direct exposure to germicidal light can cause temporary or chronic damage to your eyesight, or even blindness.
- Photo catalytic filter is permanent, never needs replacing. When there is dust on it, clean the dust off using a vacuum cleaner dusting brush. Do not wash it in water.

## Troubleshooting

Service problems that appear to be major can often be solved easily. You can be your own troubleshooter by reviewing the following guide. All other servicing should be done by a SOTO authorized service center.

| <i>Case</i>                         | <i>What to check</i>   | <i>Measure</i>   |
|-------------------------------------|--|--|
| The unit does not operate           | Power failure?<br>Power plug disconnected?<br>Maintenance panel or interlock switch failure?<br><br>Is the "  " light flashing? | Check other electrical appliances.<br>Make sure plug is fully inserted.<br>The unit does not operate when the maintenance panel is detached.<br>Install properly. Check interlock switch.<br>The cell may be wet after cleaning. Dry it thoroughly. If not, call the customer service. |
| When functions do not work properly | There is too much dust on the HEPA filter or Activated carbon filter?  | Replace the HEPA filter or the Activated carbon filter.  |
|                                     | There is too much dust on the Pre-filter or Electronic cell?   | Wash them and dry completely before reinstalling it.   |

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