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LG PS-N550WP Owner's Manual

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AIR PURIFIER

SERVICE MANUAL

MODEL: PS-N550WP

CAUTION

BEFORE SERVICING THE UNIT, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.

P/NO : MFL31520605

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Safety instructions

For your safety, the information in this manual must be followed to minimize the risk of fire or explosion, electric shock, or to prevent property damage, personal injury, or death.

Warning / Caution



Warning : This symbol will alert you to hazards or unsafe practices which could cause bodily injury or property damage.



Caution : This symbol will alert you to the possibility of improper use that may result in damage. Read instructions to avoid damage or injury.



Warning

When Installation

- If the power cord becomes worn or damaged, the cord should only be replaced by a qualified service technician using genuine replacement parts.
- Do not plug other appliances into the same outlet. Overloading of any outlet can cause a fire or create an electrical shock hazard.
- Do not remove the round grounding prong from the plug.
- Do not operate this or any electrical appliance when you smell gas.
- Do not operate with wet hands or in a damp environment.
- Do not disassemble or modify the air purifier or the power cord.
- Do not use this or any appliance near flammable gases or liquids or other combustibles, such as gasoline, benzene, thinner, etc.
- If you hear abnormal sounds or smell smoke, immediately unplug your Air Purifier and have the unit checked by a qualified technician.
- Make sure the Air Purifier and cord is positioned where it does not create a tripping hazard. Do not roll heavy furniture over the top of the cord.
- Do not use near open flames.
- Keep this product out of the direct rays of the sun or other heat sources. Do not use the unit near water sources that could allow moisture to enter the unit. Overheating and/or water infiltration could lead to a fire or shock hazard and could result in failure of the product.

1

Safety instructions

In-Use ●

- Make sure the power cord is plugged firmly and completely into the outlet.
- Do not operate with wet hands.
- If the power cord ever becomes frayed or damaged, do not attempt to repair. The cord should be replaced by a qualified technician.
- Never pull the power plug away from outlet by pulling on the wire. Always grasp the cord by the receptacle end.
- Do not install a place where there are much industrial Oil dust or metallic dust.
- If may cause fire and failure of product.
- When the power code is damaged, it should be repaired by the qualified person to prevent any risk.
- It may cause electric shock, fire or failure of product.
- Never pour or allow water to run onto or into the unit; it could damage internal components and create a shock and fire hazard.
- Keep objects such as curtains away from the air openings in the unit. The openings must be free from obstruction for the unit to work efficiently.
- Do not run power cords under carpeting or other coverings which could fray the cord and expose the wires. Frayed cords are a shock and fire hazard.
- Do not place the power cord or Air Purifier near a heater, radiator, or other heat source.
- This air purifier is not designed for use by young children. Young children should be supervised to ensure that they do not play with or climb on the air purifier.
- Do not use your Air Purifier to remove hair spray and insecticides from a room. These chemicals not only clog the filters but could damage the unit.
- Secure the air purifier to prevent it from rolling on smooth floors. When moving the product, insure that the power cord is unplugged from the wall.
- Do not move the air purifier by pulling or pushing on the front panel.
- Do not use the top of the unit for storage. Keep liquids away from the top of the unit.
- Other than cleaning and replacing the filters, there are no user replaceable components in your Air Purifier. Service of this unit should be referred to a qualified service technician.
- Do not apply pressure to the front panel of the air purifier.
- Keep hands and objects away from the air inlet and outlet.
- Do not clean the unit by submerging in water. Water in the unit will damage the insulation and create an electrical shock hazard. If water enters the unit, unplug immediately and contact Customer Service.

1

Safety instructions



Caution

When Installation ●

- When using the unit, maintain a distance of at least 3 feet between the Air Purifier and any Television or audio product.
- Avoid installing the Air Purifier in direct sunlight and never operate the unit near or around open flames or other heat sources.
- Never use your Air Purifier to remove toxic gasses (such as Carbon Monoxide, Natural or Liquefied Petroleum Gasses).
- Do not use your Air Purifier to remove food odors while cooking. Airborne oils that are released during cooking will plug the filters. Wait until cooking is completed before operating your Air Purifier.
- Install the unit on a stable, flat surface. Do not drop the unit.
- Maintain a minimum distance of 5 ft from any heat producing light source. For proper ventilation, maintain a distance of 6 inches or more from a wall.
- Do not use except AC 120V.
- It may cause fire or electrical shock.
- This unit is not designed to remove combustion by-products such as those produced by open flame burners. Toxic substances such as carbon monoxide should be ventilated from the room by either using an exhaust fan or by opening a window.
- Your air purifier is not designed to be used in moving vehicles such as cars, RV's or boats.

In-Use ●

- To prevent damage to plants or injury to pets, make sure they are not exposed to direct air flow from the air purifier. This unit is not intended to be used for the preservation of art objects or precision machinery.
- Clean with a soft cloth and mild detergent. Filter should be cleaned once a month.
- Do not start or stop operation by plugging in or unplugging the power cord.
- Always turn off and unplug the air purifier when it will not be used for extended periods of time. This conserves energy and reduces the chance of accidents.
- Clean filters on a regular basis. Improper filter maintenance can cause premature failure of the product.
- Turn off and unplug the unit before disassembling the unit for cleaning.
- A damaged filter can create an electrical hazard.
- If a humidifier is used in the same room as your Air Purifier, keep the humidifier a safe distance away from the Air Purifier. Moisture from the humidifier could clog the filters and create an electrical shock hazard.
- Do not use your Air Purifier to remove food odors while cooking. Airborne oils that are released during cooking will plug the filters. Wait until cooking is completed before operating your Air Purifier.
- Do not open the front panel during the operation of the product.
- Opening the front panel stops the operation.
- Keep batteries out of reach of children.
- After washing your filters, make sure they are completely dry before reinserting them into the Air Purifier. Do not run your Air Purifier with wet filters.
- Keep flammable products away from your Air Purifier. Failure to keep flammable products away from your purifier could lead to premature failure or create a fire hazard.

Terminology

1-1. Negative ion

(1) What is a negative ion?

Atomic element in the air with negative electrons that releases a refreshing feeling. It can be found in a forest, waterfalls, thermal spring and etc. If the atom loses an electron, it turns into a positive ion. If the atom gains an electron, it turns into a negative ion.

(2) The platinum three-dimensional anti-bacteria system.

99.9% highly purified platinum catalyst filter completely removes those factors which could cause the sickhouse syndrome such as VOCs, harmful chemical element and its smell.

1-2. VOCs (Volatile organic compounds)

(1) What is VOCs?

Carcinogenic substances that cause allergies or respiratory ailments, such as a paint, adhesives, spray, construction materials, wax, carpet, and etc. Unlike the general perception that only cheap construction materials emit VOCs, high quality new constructions may also emit VOCs. It may stay remained in a closet or inside of furniture even after several years.

Filters Introduction

(1) Pre-Filter

One filter performs antibiotic treatment, anti mold treatment, and dust removal, providing a purified air.

(2) Photo-Catalyst Plasma Filter

Photo-Catalyst Plasma Filter removes microscopic motes, odor, yellow-dusts, and allergy causing substance through a 3 stage process, plasma generation part, dust collecting part, and photo-catalyst filter

(3) Anti-allergic Filter.

The anti-allergic filter could absorb and decomposes the ingredients which causes the allergy, having the allergy preventive effect also removing the odor and anti-bacteria effect.

(4) Washable HEPA Filter

HEPA filter polluted by acarid deadbody, pollen, small dust and float mildew, animal bodyhair etc. can be washed.

(5) Washable Deodorization Filter

This filter was processed with activation treatment for stronger adsorption function (characteristic of charcoal). This deodorization filter has higher level of negative ion, minerals, far infrared rays generation ability than charcoal.

3

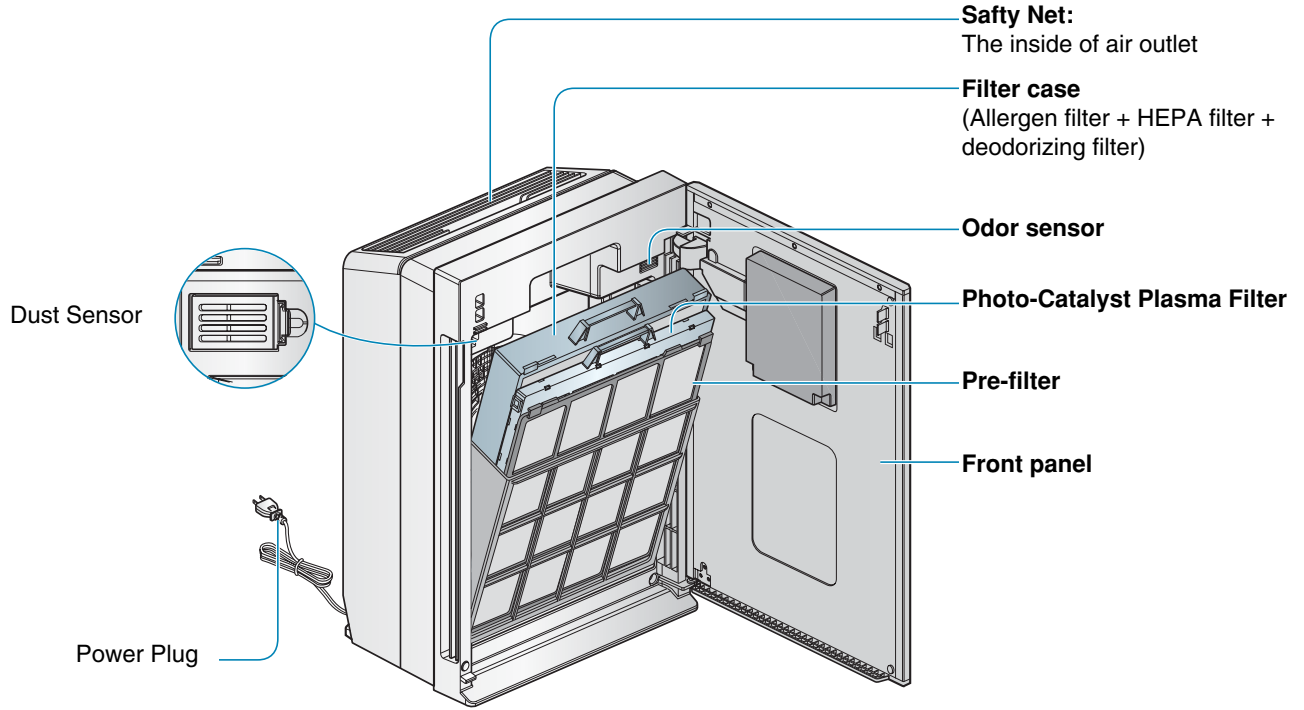
Major specifications on each model

Model name	PS-N550WPR
Power Supply	120V~60Hz
Measurement(W×H×D)	426mm×568mm×271mm
Application Space	45m ²
Weight	12.0kg
Color	Red
Design	Easy design for convenient operation
Power usage	55W(Turbo)
Noise	Turbo(47dB)
Wind speed(CMM)	Turbo(6.4CMM)
Negative ion Generation	Generate 1million super negative ions
Inhale system	side surface inhale system
Purifying system	Three dimension filter system
Major Filter System	Pre-filter - Anti-allergic filter - Washable HEPA Filter - Super Negative ion/ Sterilization
Filter composition	Washable part - Replacement part
Remote controller	Ez remote controller
Sensor	Digital 2 Sensor(dust, smell)
Display	Digital Wide LED display
Display Information	Dust, Smell, Purity level, Fan speed, Filter Checking, Function Selection, Operation Mode, Reservation time
Operation Mode	Speed, Automatic, Yellow Sandstorm, Sleeping
Function Selection	Negative ion, Sterilization
Wind Speed	Turbo-Strong-Soft-Weak

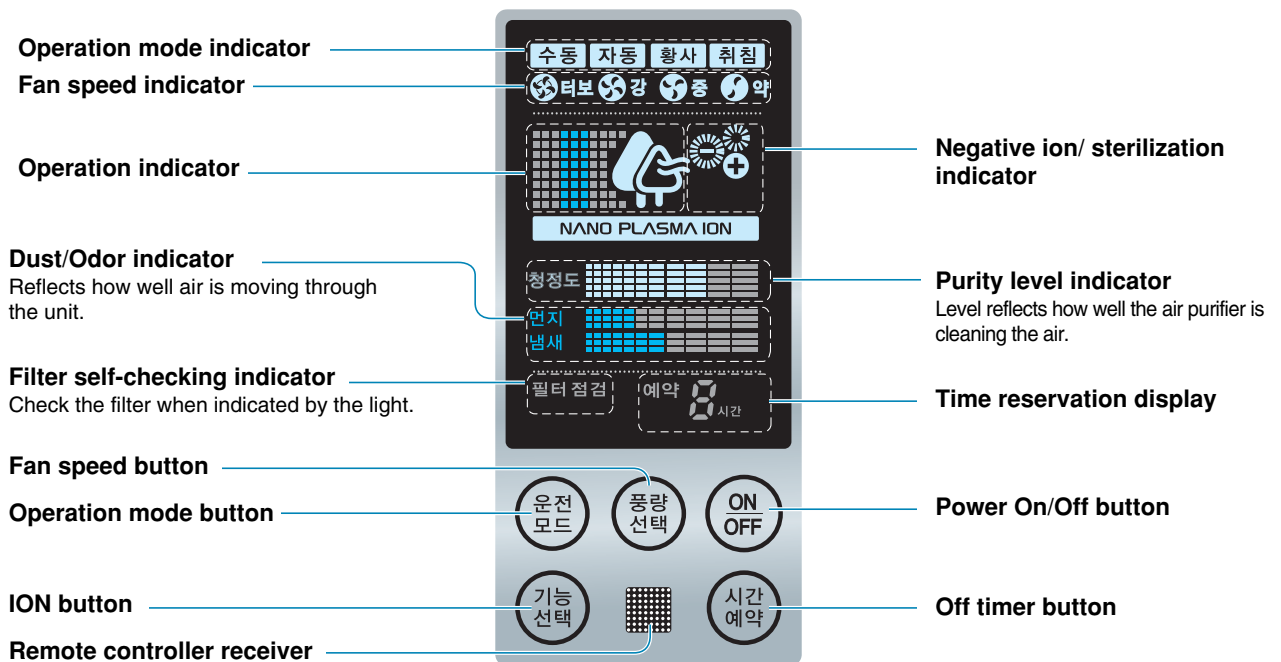
4 Operations/Functions Manual

Spare part Name

Mainframe

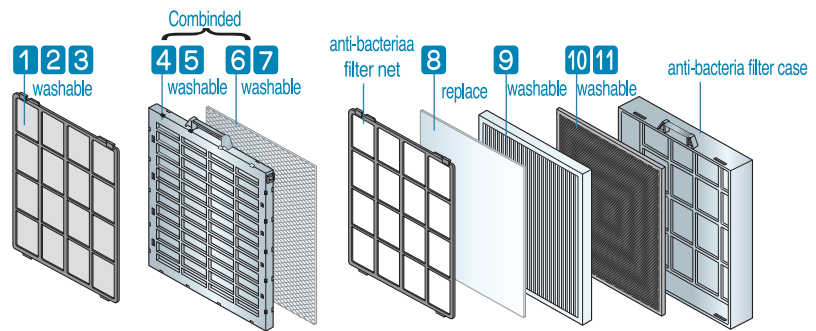


Display and controller



4

Operations/Functions Manual

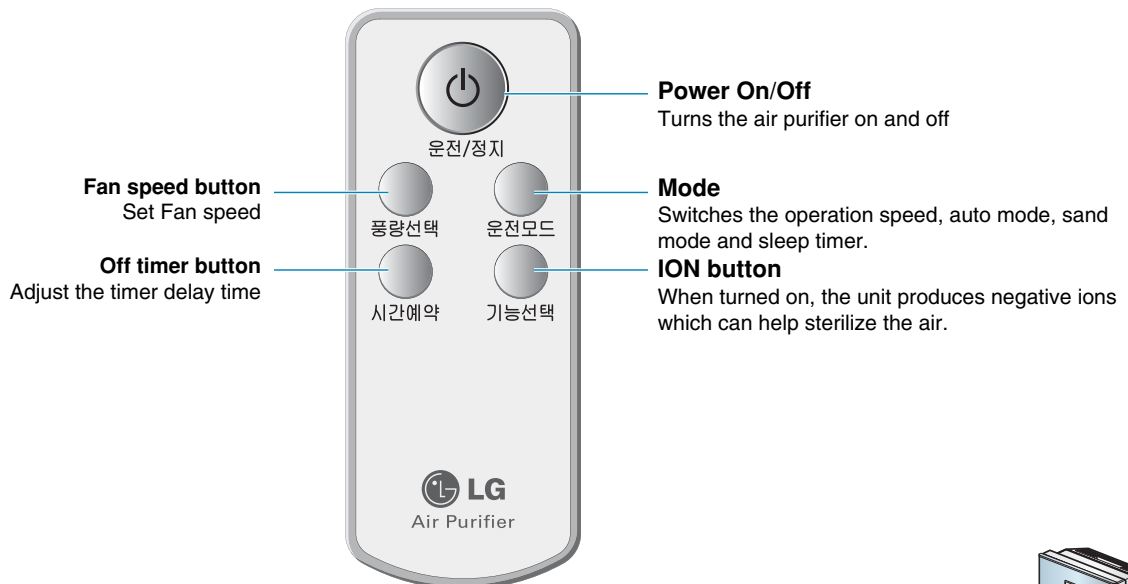


Filter system (include the filter part only)

Filter name	Function	Washing/Replacement cycle
1 Removes large particles 2 Anti-bacteria function 3 Anti-mildew function	Pre-filter This filter has anti-bacteria, anti-mildew, and large particle filtering functions. In extreme filtering conditions, these filters may have to be cleaned or replaced more often.	Once a month
4 Plasma dust-absorb filter 5 Plasma deodorant filter	Plasma filter Filters large particles such as pollen, soot, and mildew. Absorbs odors and dust.	Once a month
6 Photo-catalyst anti-bacteria filter 7 Photo-catalyst deodorant filter	Photo-catalyst filter Additional odor absorption and large particle filtering. Remove odor particles, VOCs, smoke smell, musty smell, decompose malodor ingredients and chemicals.	
8 Anti-allergic filter	Absorbs and eliminates allergens.	
9 Washable HEPA filter	Washable HEPA filter removes pollens, dirt particles, dust and mildew from the air.	Every 6 months
10 Washable carbon Catalyst function 11 Nano Platinum filter	Washable deodorization filter Eliminates food, pet and other odors. Removes alkaline, acid and organic compound odors. This filter uses jewelry grade platinum and should be disposed of properly when discarded.	Every 6 months

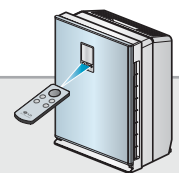
- ※ Allow the filter to dry completely before reinstalling. If not completely dried, it may cause the air purifier to malfunction or cause bad odors to be emitted during use.
- ※ A replacement filter (Anti-Allergic Filter) can be purchased at an LG service center.

Remote Controller

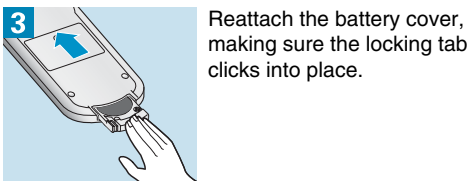
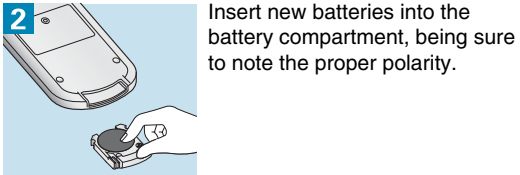
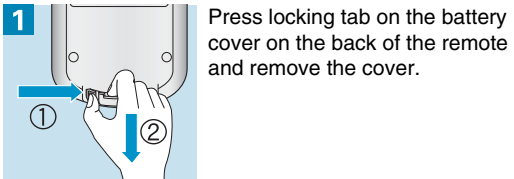


Remote Control

Must be aimed at the remote control receiver window on the main unit.



Battery Installation



Caution



Press only one button on the remote at one time.

Press only one button on the remote at one time. Pressing two or more buttons simultaneously will prevent the remote from working properly.



Do not drop or otherwise damage the remote.



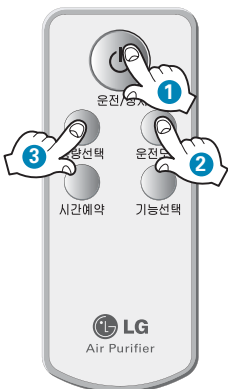
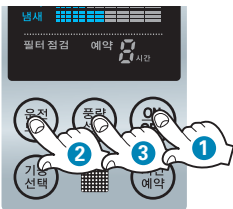
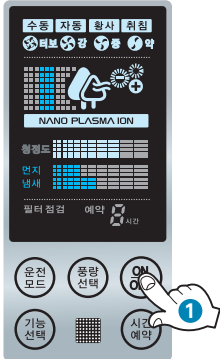
Keep remote away from water.



Keep remote away from heat sources or open flames.

- Remove batteries when the air purifier is stored for extended periods of time.
- If controller fails to work after new batteries are installed, contact an LG service center for service.

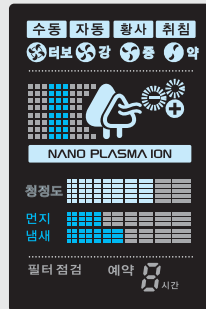
Operation Mode



Air Purifying Operation Purify Indoor Air

1 Power ON/OFF

Turns the air purifier on and off. Press once to turn on, again to turn it off. A confirmation tone will sound to indicate that the unit is powering on or turning off. The unit will also produce a tone when the unit is first plugged in.



What is "Start-up Operation"

When first turned on, the unit will go through Start-up function which prepares the unit for operation. During this 2 minute period, the display will fluctuate to indicate that the unit is sensing the air quality in the room.

Speed mode User may manually adjust fan speed

1 Power ON/OFF

2 MODE switches allows the user to select the various modes of operation including auto fan and sleep, sandstorm and self timer modes.

3 Fan Speed

Adjusts the circulation fan speed between low, medium, high and turbo.

- The default speed is low.
- When the unit is shut off and restarted, the fan speed will default to the last fan speed used.



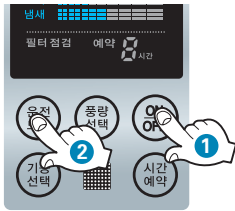
Automatic mode Air Purifier will automatically set the most appropriate Fan speed.

1 Power ON/OFF

2 Automatic Mode

- When in AUTO mode, the fan speed is automatically selected by the unit depending on pollution levels. Even in the AUTO mode, however, the user can still increase or decrease the fan speed by one level by depressing the fan speed button.
- The AUTO function only automates the fan speed. All other functions need to be set by the consumer.





Yellow Sandstorm Mode Purifies indoor air even in extreme conditions such as a sandstorm

1 Power ON/OFF

2 Switch to sandstorm mode by pressing the mode button.

The correct fan speed will automatically be selected by the unit.
The consumer can increase the fan speed to the next highest level by depressing the fan speed button.
When in the sandstorm mode, the unit will automatically select the proper fan speed. All other functions must be manually selected by the consumer.



Sleeping Mode Provide quiet indoor atmosphere while sleeping

1 Power ON/OFF

2 Press MODE button until the SLEEP light illuminates on the unit.

When in the SLEEP mode, the unit will automatically select low fan speed. The consumer can increase the fan speed to the next highest level by depressing the fan speed button.



Additional Function



Off timer mode function Automatically shuts down after a preset amount of time

Example: shut down automatically after 3 hours

- 1 Power ON/OFF**
- 2 Allows you to set a delay from 1 to 9 hours that will turn the air purifier off automatically.**

When this mode is selected, the unit will automatically select 3 hours of run time. If more time is required, press the timer button again. Each time the button is depressed, the run time will increase by 1 hour. At the end of the selected time, the unit will automatically shut off.



- Maximum reservation time is 9 hours
- Shut down automatically.

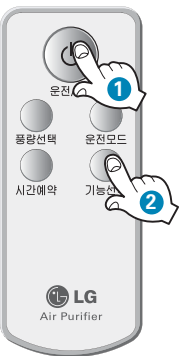
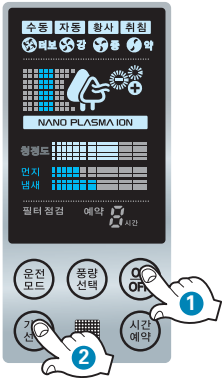
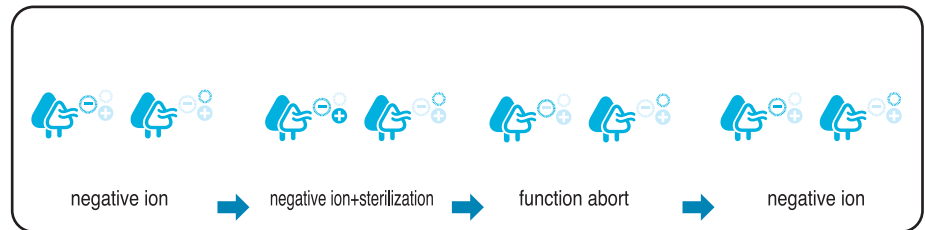
- Automatically shut down 3 hours later.

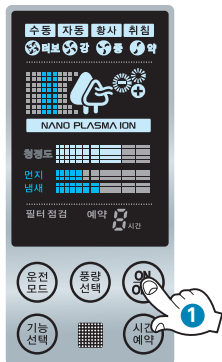
Negative ion / sterilization function

In the Negative Ion mode, the unit generates and adds negative ions to the air stream. When in the sterilization mode, the negative ions will also remove bacteria from the air.

- 1 Power ON/OFF**
- 2 Press the function button to choose expected function.**

- Press button each time, switch according to 'negative ion - negative ion+sterilization - function abort - negative ion' sequence.





Filter Checking Function May remind users to clean or replace the filter after use for a certain period.

- 1 Filter self check light indicates to check filter.
- 2 Power ON/OFF to shut the unit off.
- 3 Open front panel to remove filter. Check filter, clean if necessary. (see page 15 to clean filter).

• How often filter must be cleaned will depend on use and air conditions in the home.

Exterior Cleaning Method

Wipe the exterior of the air purifier with a soft cloth with warm water and mild detergent.



Caution

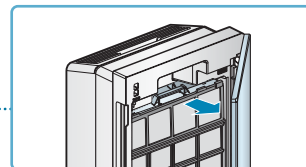
- Do not use harsh cleaners or very hot water. Do not wash in dishwasher.
- Never pour water onto the unit; it could damage internal components and create a shock and fire hazard.



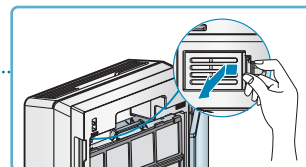
Dust sensor cleaning method

The dust sensor senses both small and large dust particles. The sensor needs to be wiped clean to maintain high performance.

- 1 Open the front panel to access the the dust sensor cover.

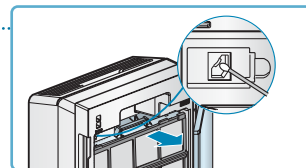


- 2 Open the dust sensor cover.



- 3 Wipe the sensor lens of with a cotton swab.

After cleaning the lens, close the cover of the dust sensor in the reverse order.

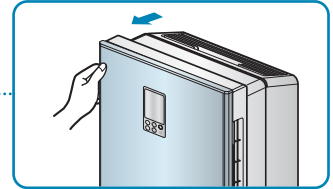


Clean the sensor lens every 6 months. If the environment is very dusty, more frequent cleaning is recommended

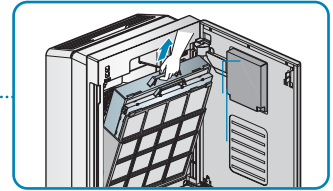
Filter Cleaning

- The prefilter should be cleaned on a monthly basis.
- Check the filter when the filter indicator light is on.

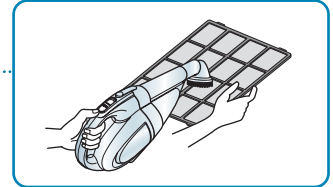
- 1 Turn unit off and unplug before cleaning.**
Grasp the grips on the front panel, pull forward to open.



- 2 Remove the filter from the mainframe. Clean or replace.**

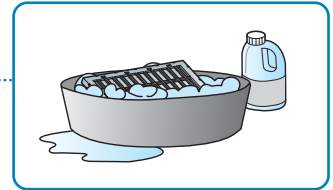


- 3 Clean the pre-filter with a vacuum or soft brush.**

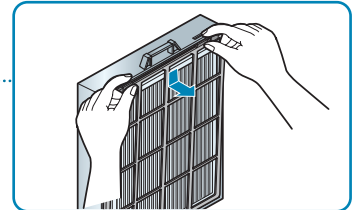


- 4 Photo Catalyst Plasma Filter Cleaning**
Soak the filter in warm water with a mild detergent for 1 hour. Remove particles from the filter by shaking the water from the filter. Rinse the filter with warm water. Completely dry the filter before replacing the filter.

The ionization wire inside of the filter case is fragile. Please clean with care. Use a soft cloth when cleaning the photo catalyst plasma filter. The filter coating may peel resulting in reduced performance.



- 5 Separate filter case to remove the filter.**

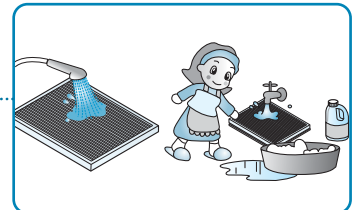


- 6 HEPA and Deodorizing washable filter. Soak in warm water for an hour. Rinse.**
NOTE: The anti allergic filter should NOT be washed. Washing this filter will reduce its efficiency.

Clean the washable HEPA filter and deodorization filter with warm water and rinse under running water. Dry filter in a well ventilated room until completely dry.

Filter Type	Washing Cycle
Pre-Filter	Once a month
Photo-Catalyst Plasma Filter	Once a month
Washable HEPA Filter	Every 6 months
Washable deodorization Filter	Every 6 months

- Clean Pre-Filter with vacuum or soft brush and mild detergent.
- Do not use water over 40 degrees Celsius (105 degrees F)
- Do not allow Anti Allergic filter to become wet.



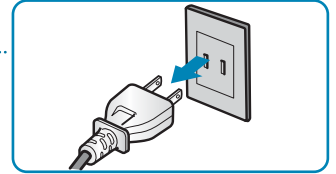
- 7 Replace Anti Allergic filter every 6 to 12 months.**

⚠ Caution

- For your safety, turn off and unplug the air purifier before cleaning.
- Allow the filters to completely dry before using.
- Utilizing the unit before all the filters are completely dry may result in the creation of odors from the unit.
- Replace filter when unable to remove all dirt on the filter.
- Please do not rub the filter in your hands.

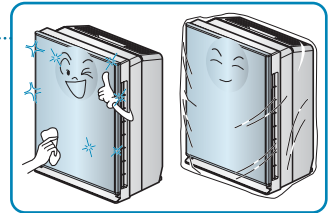
Maintenance

- 1 Remove plug from grounded outlet.



- 2 Clean and protect the air purifier's mainframe.
Cover the air purifier when storing for an extended period of time.

Clean with a soft cloth and mild detergent.
Exterior case may scratch easily

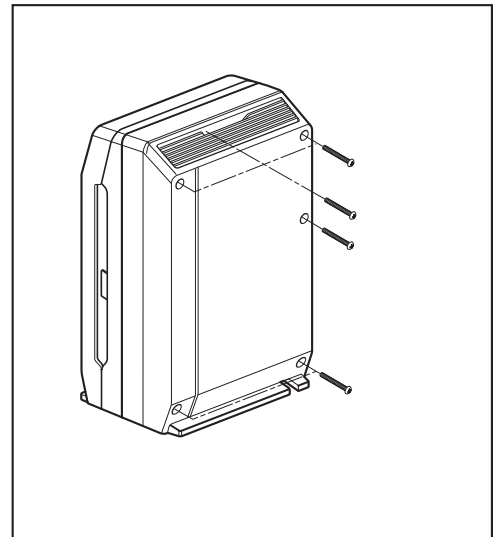


Please read this before you disassemble**Please unplug the power before disassemble.**

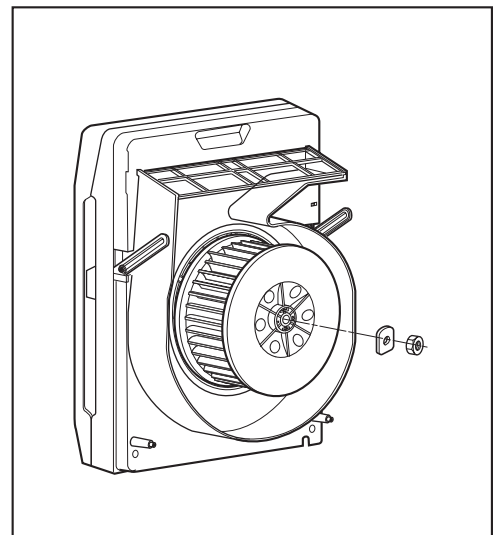
1. Most components are connected with bolts or mounted on the other parts. Please disassemble according to the instruction.
2. Please do not disassemble unless it is absolutely necessary. Do not disassemble any part that is not on the disassemble instruction.

Please unplug the power before disassemble**Replacing a fan, or a motor**

1. Please remove 6 screws from the Case Back using a Screw Driver(+). Take Handle Cover and Back Cover off.



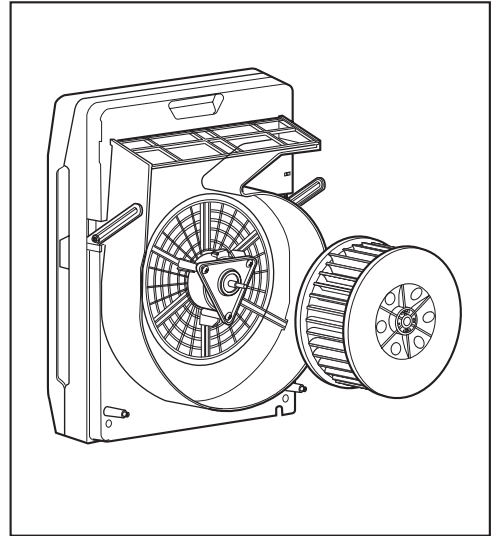
2. Unscrew bolts using a wrench.
(Turn it counter clockwise.)



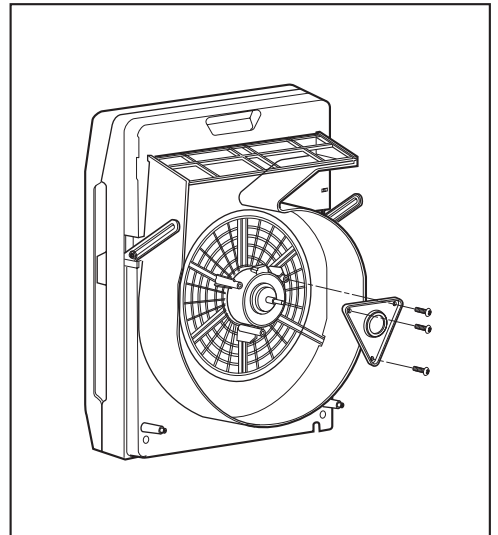
5

Major components Disassemble Assemble and Repair instruction

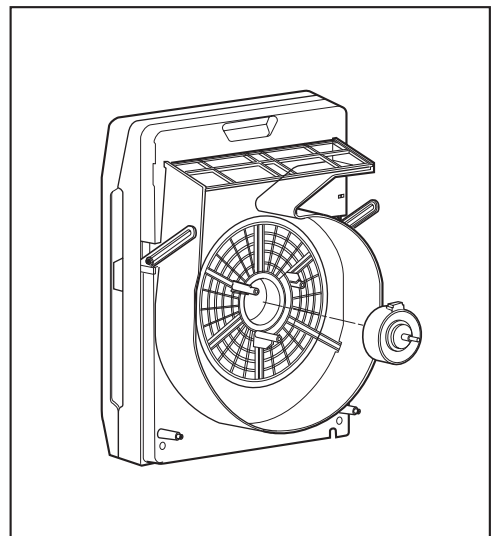
3. FAN is disassembled by holding and pulling fan.



4. Please remove 3 screws from the Motor Cover using a Screw Driver(+).

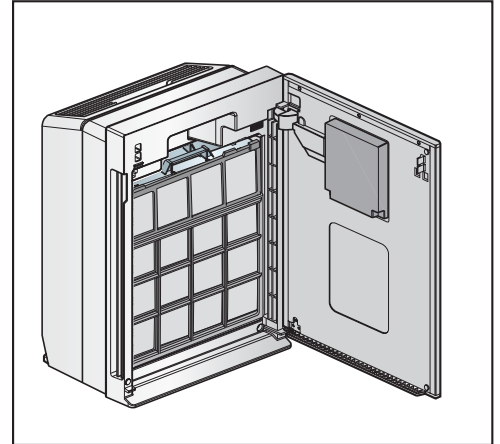


5. Remove the Motor Cover. Take out the Motor. Please be careful not to damage the Motor wire when removing the motor.



When replacing the display PCB and the touch key

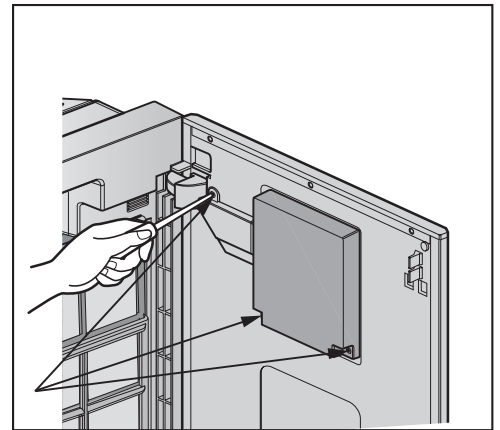
1. Open the door assembly



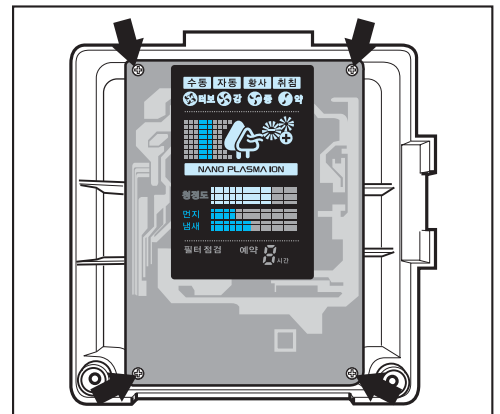
2. Loosen the screws on the back of the display cover (3 positions)

Disconnect one wire and 2 connectors

When removing the display cover, disconnect a touch key connector

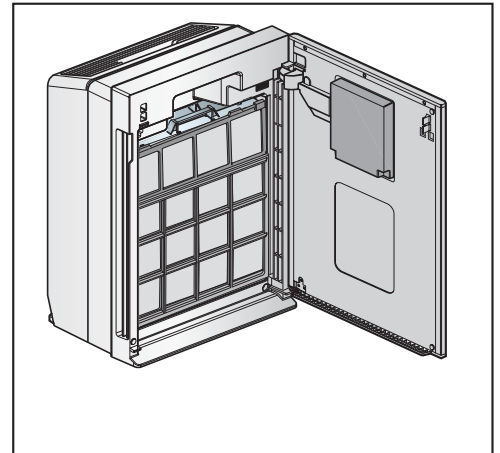


3. Loosen the screws on the front of the display cover (4 positions)

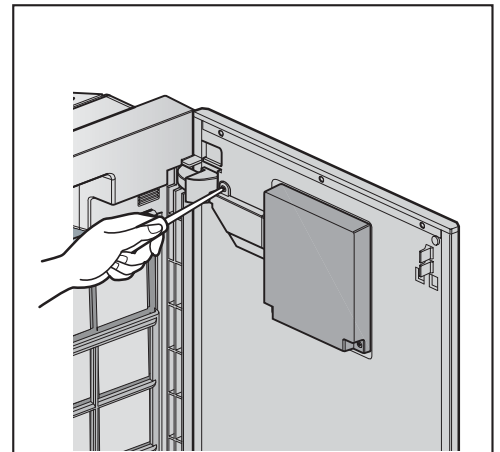


How to replace the tempered glass and the touch key

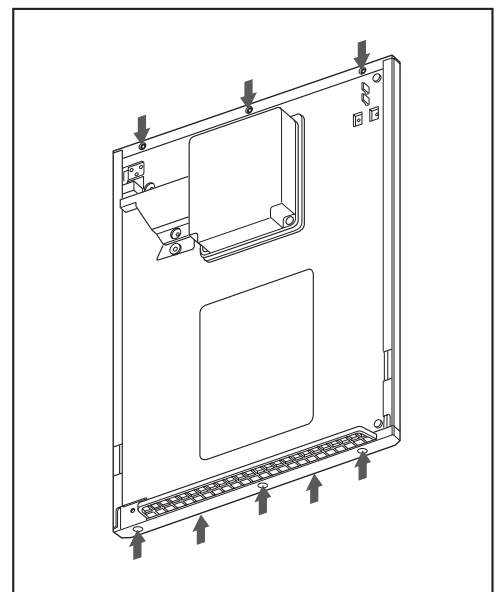
1. Open the door assembly



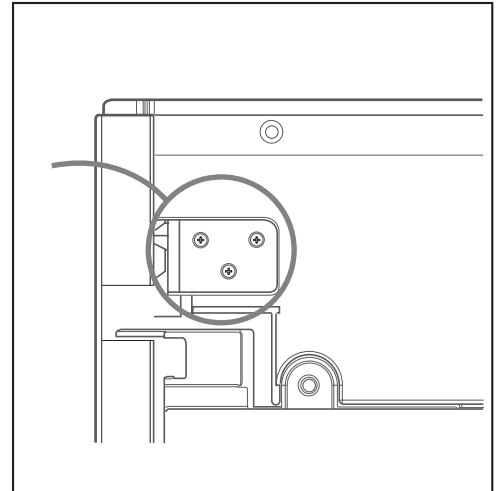
2. Loosen the screw (1 position)
Open the cover and disconnect one wire and 2 connectors
Remove the door assembly by pulling up.



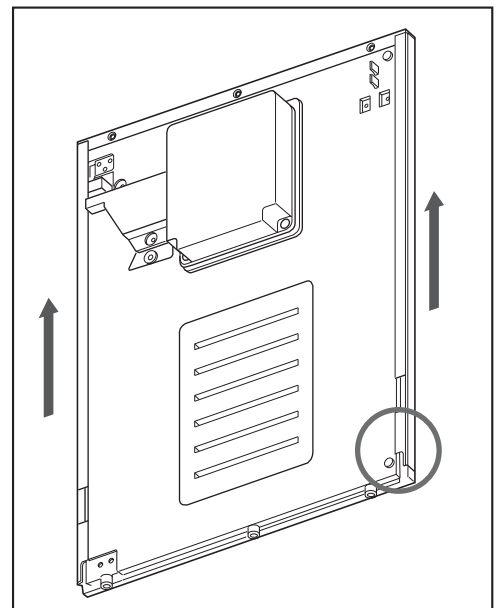
3. Loosen the screws of the 8 positions on the door assembly.
Remove the upper and lower deco covers.



4. Loosen the screws (3 positions).
Remove the plate iron
Remove the deco cover (Top)



5. Remove the side deco by pushing up.
Remove the tempered glass (When removing, disconnect a connector)
Be careful not to lose the magnet indicated in the figure.

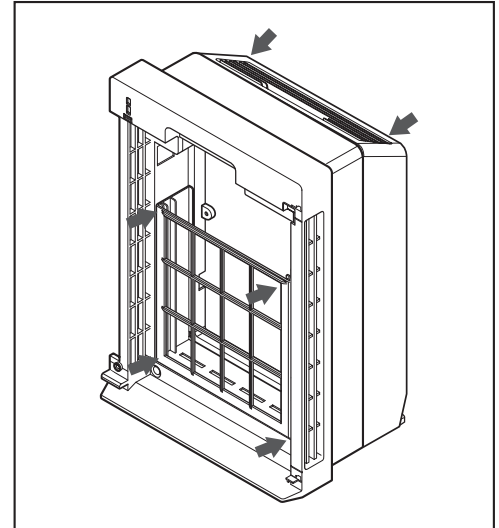


6. After replacing the tempered glass and the touch key, assemble them in the reverse order of the disassembly

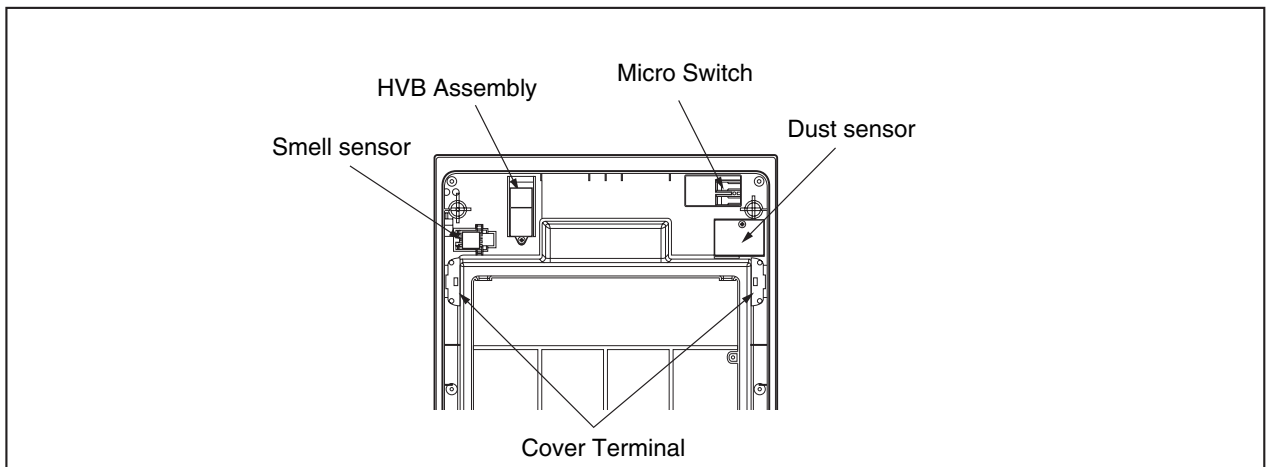
How to replace gas & dust sensor, HVB assembly, micro switch and cover terminal

1. After disassembling the door assembly, remove the filter. Loosen the screws of 6 positions

When removing the front case assembly, disconnect the connectors on positions.

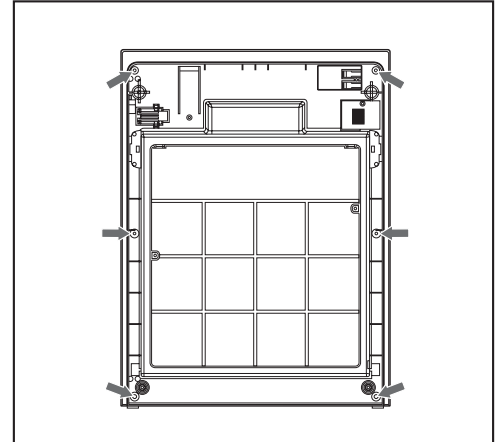


2. Remove the front case assembly. Replace the necessary parts.



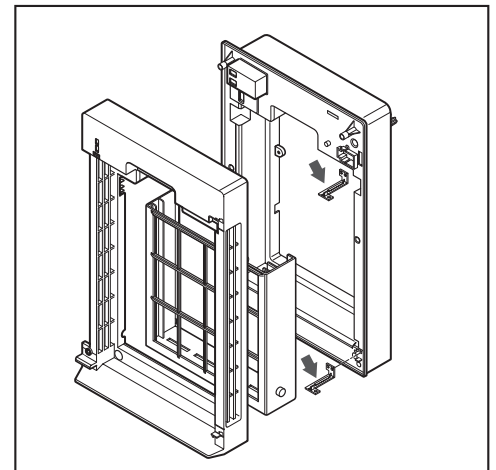
How to replace the guide filter, bracket, and magnet assembly

1. Loosen the screws of 6 positions on the front case assembly.



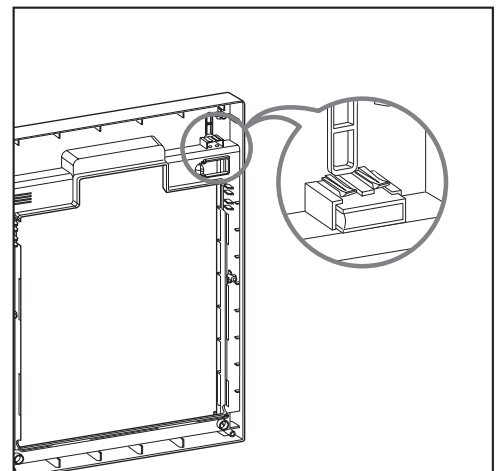
2. When removing the front cover, the guide filter is removed.

When removing the screws of 2 positions on the front case, the bracket is removed.



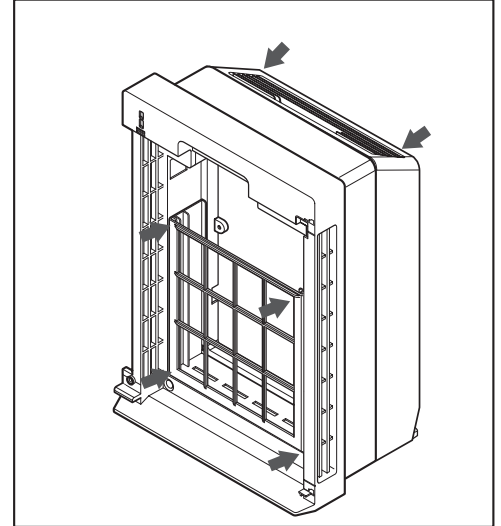
3. Remove the magnet assembly using a \ominus screw driver.

(Be careful not to damage the hook)

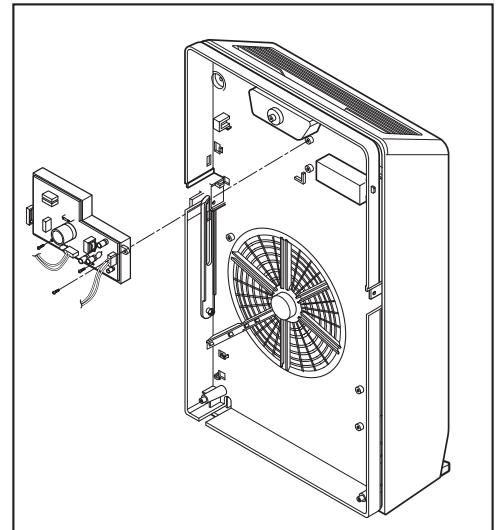


How to replace the power PCB

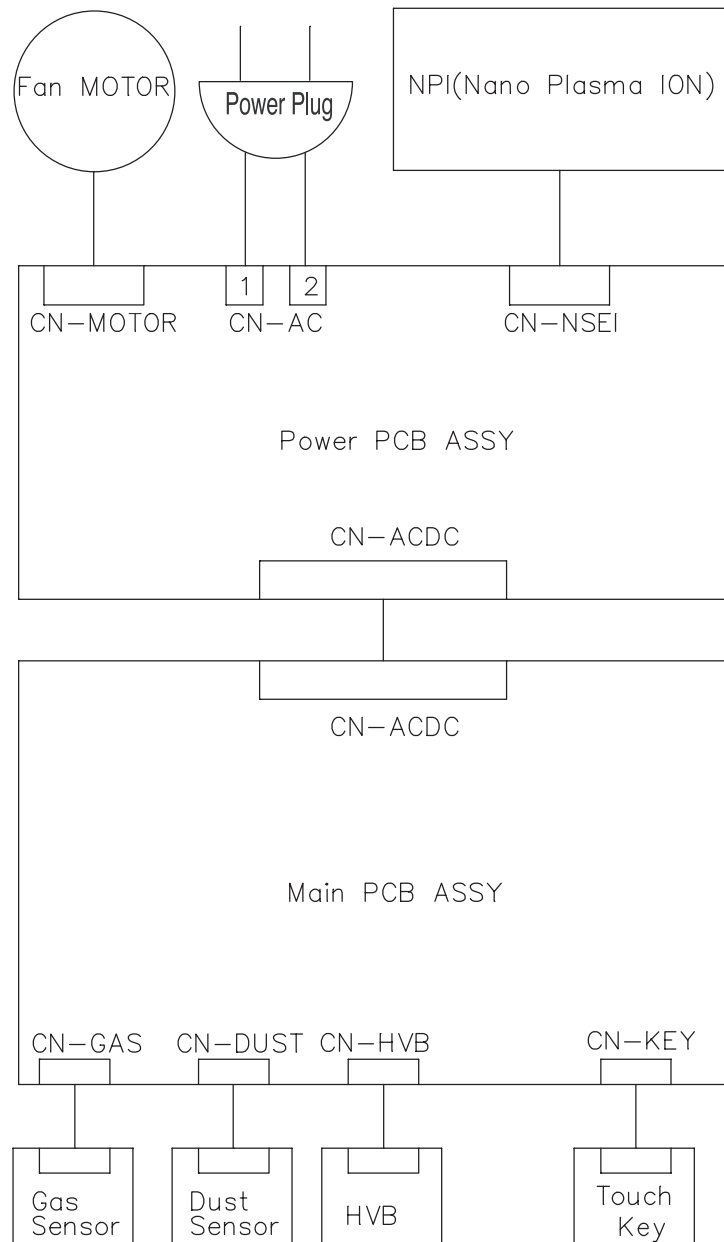
1. After disassembling the door assembly, remove the filter.
Loosen the screws of 6 positions.



2. Loosen the screw (1 position) attached on the control PCB case using a \ominus screw driver.
(Loosen the screws (2 positions) attached on the power PCB using a \ominus screw driver.)
When disconnecting the connector, be careful not to damage the PCB.



6 Electric diagram

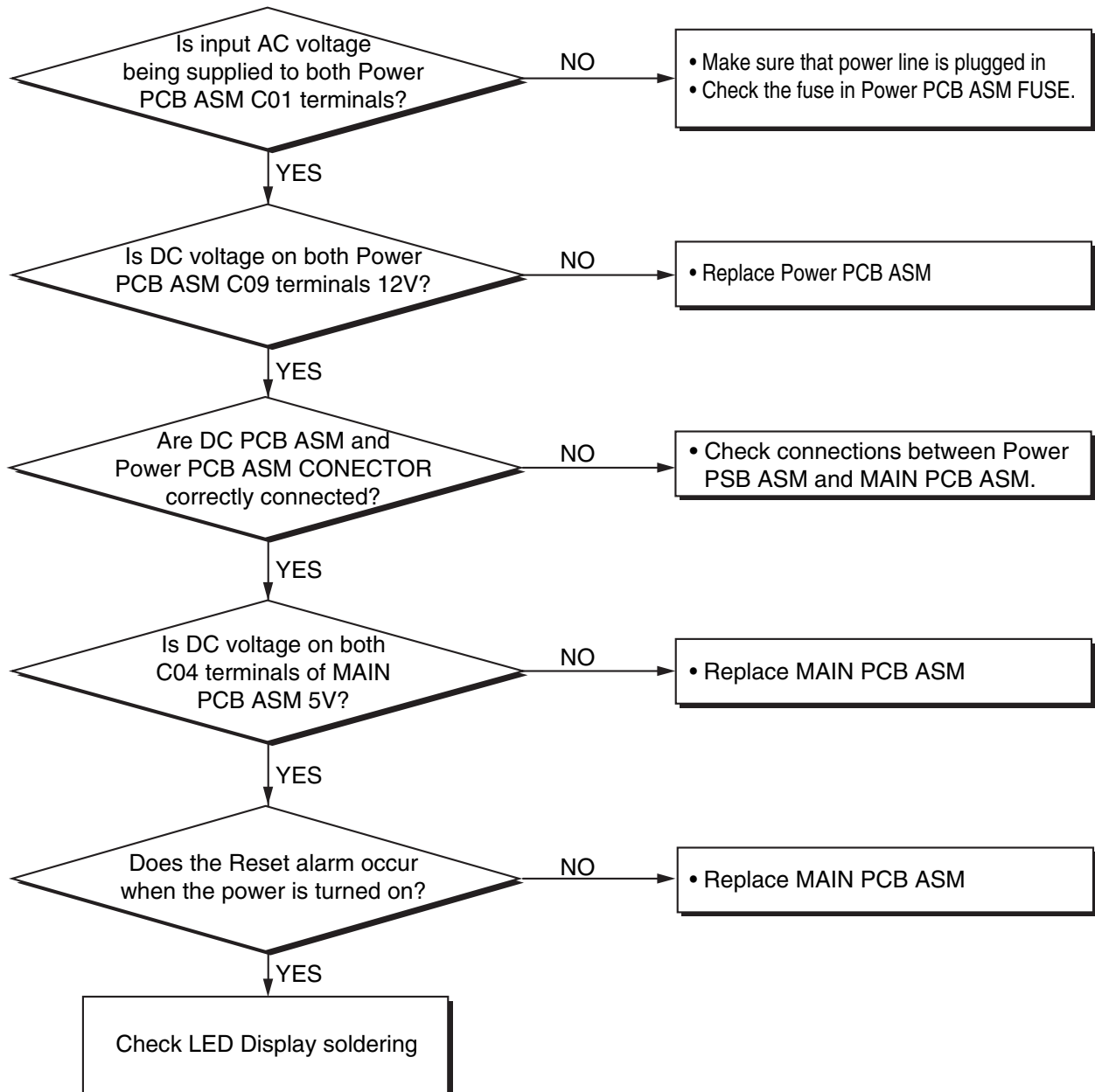


7

Troubleshooting and inspection direction

Please take a look at the panel arrangement and the circuit drawing.

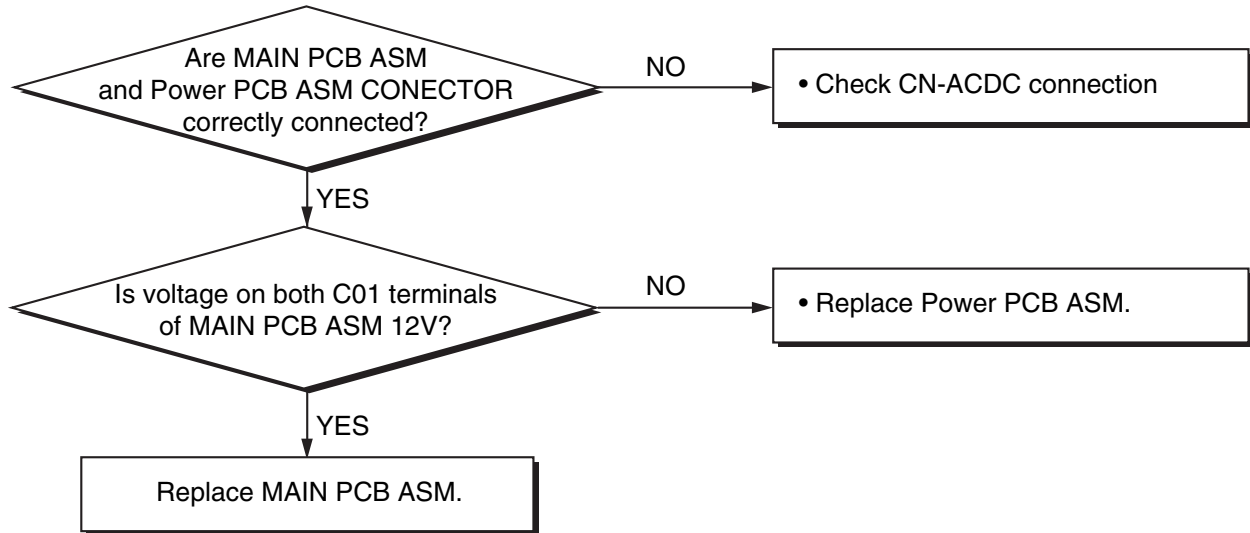
Complete Malfunction



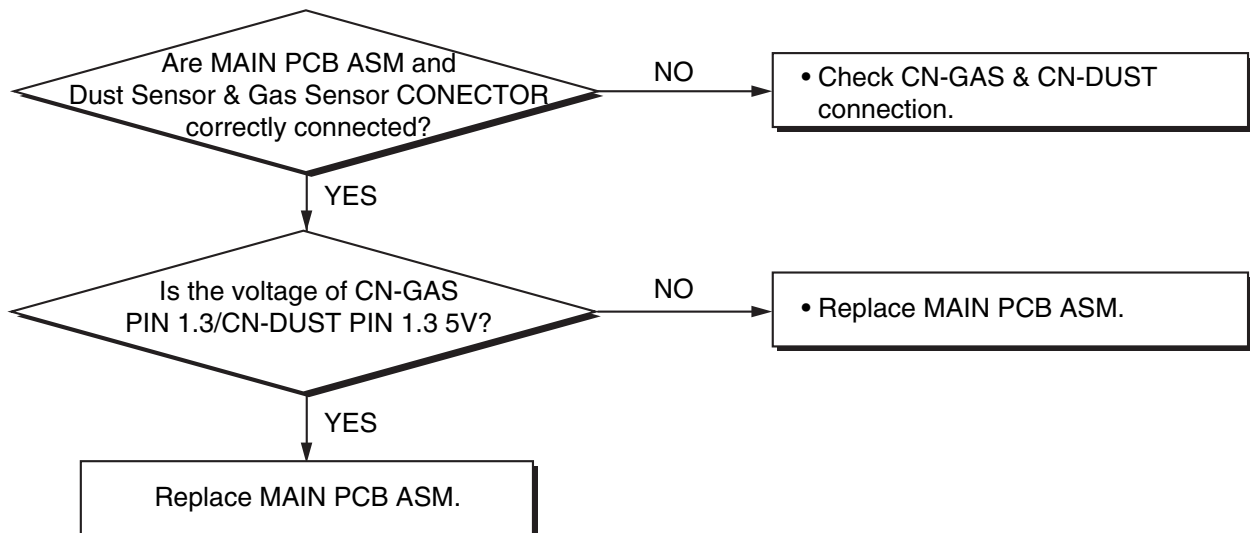
7

Troubleshooting and inspection direction

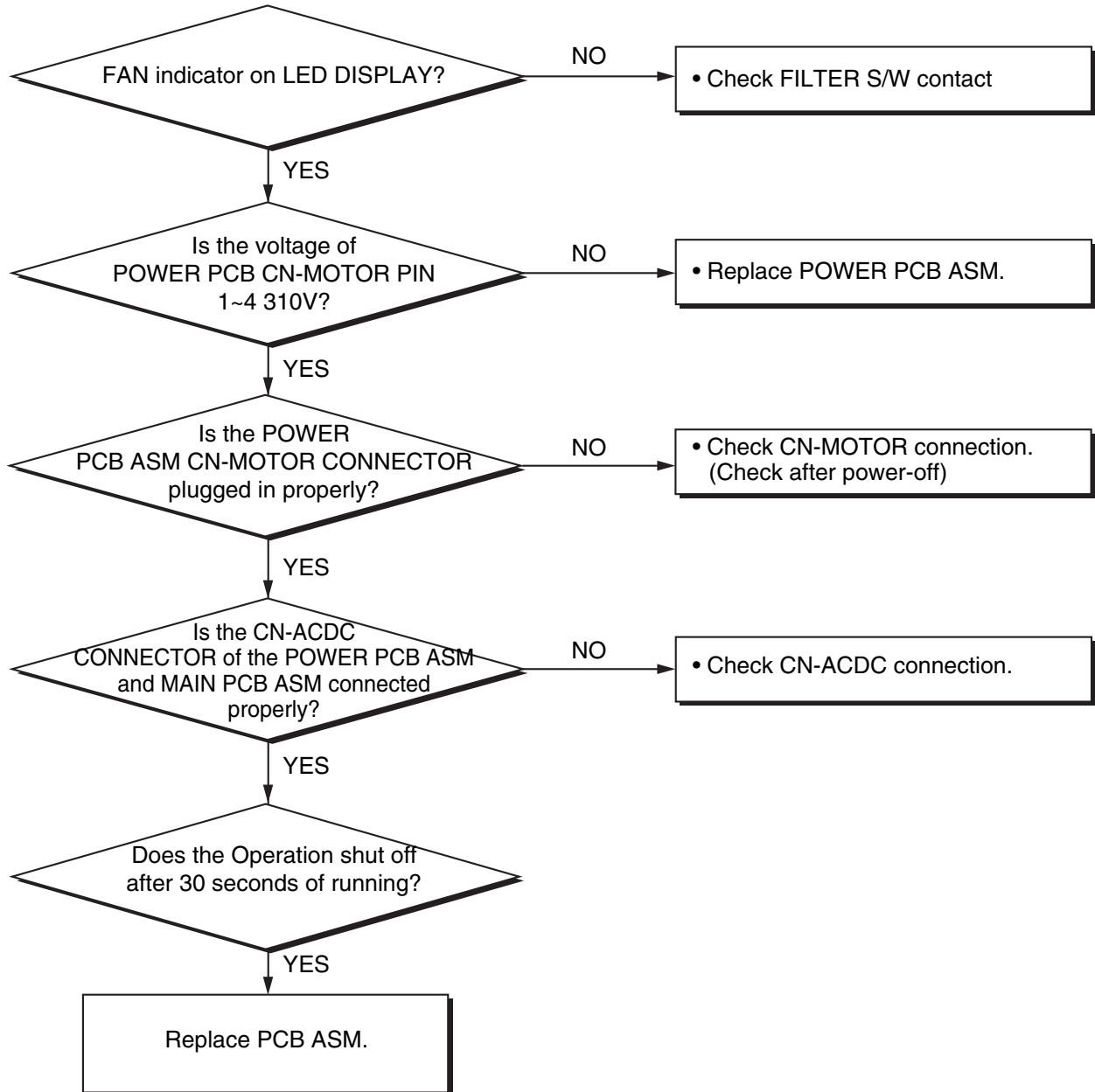
LED Display Malfunction



Dust & Odor LED Display blinking



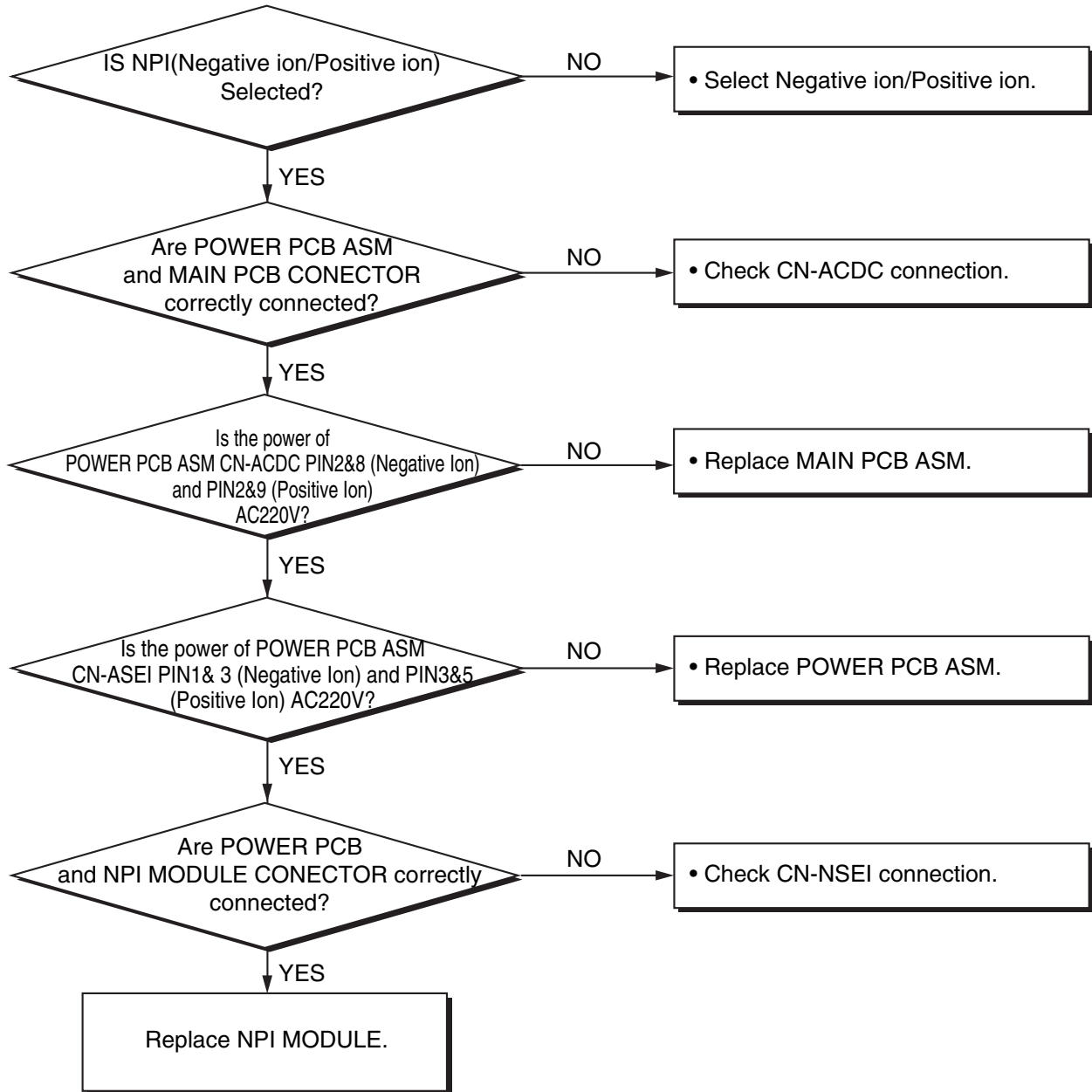
Fan Malfunction



7

Troubleshooting and inspection direction

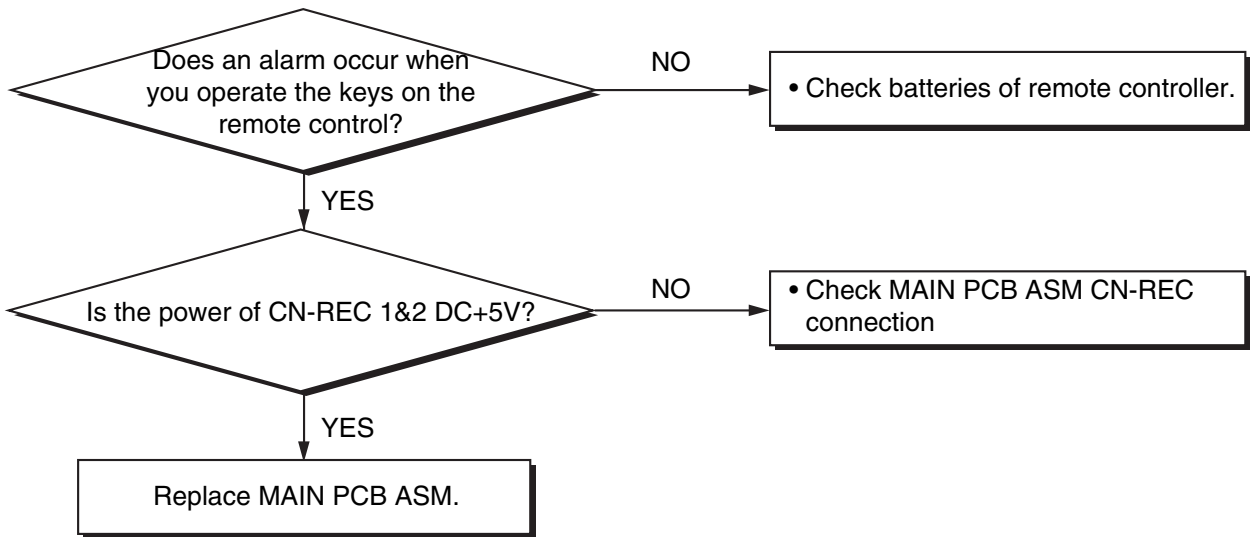
Negative Ion/Positive Ion generation malfunction



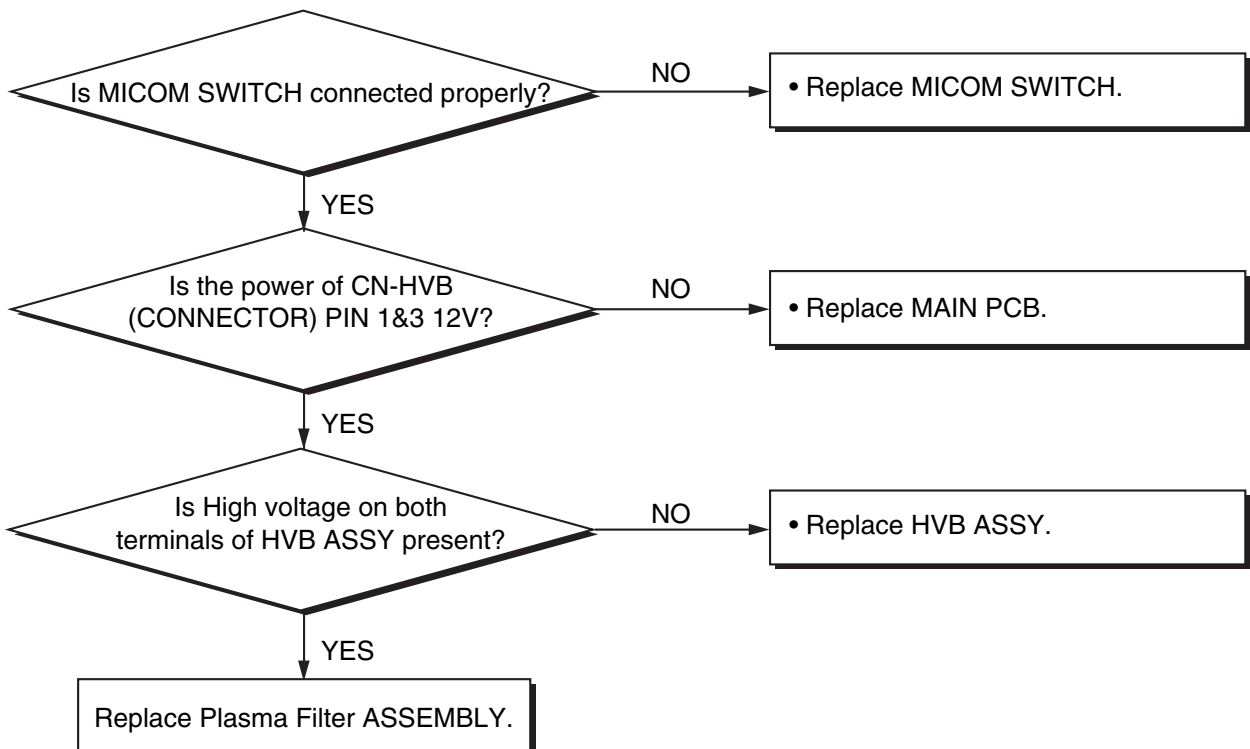
7

Troubleshooting and inspection direction

Not able to set product function with a remote control.

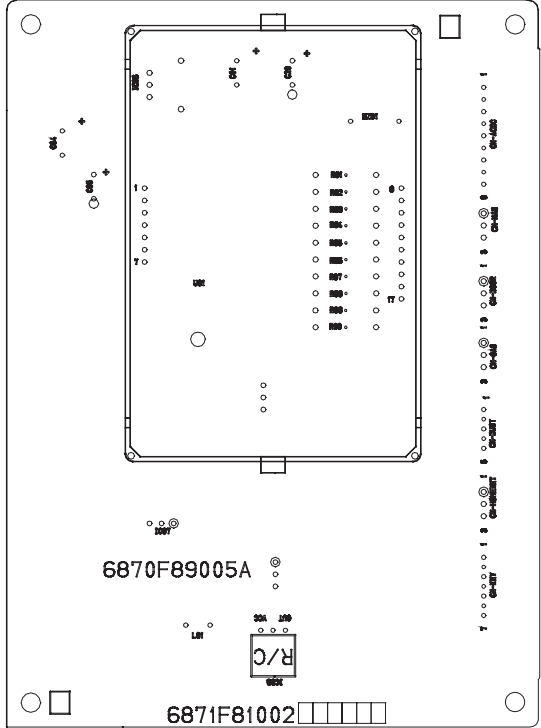


Plasma dust collector malfunction

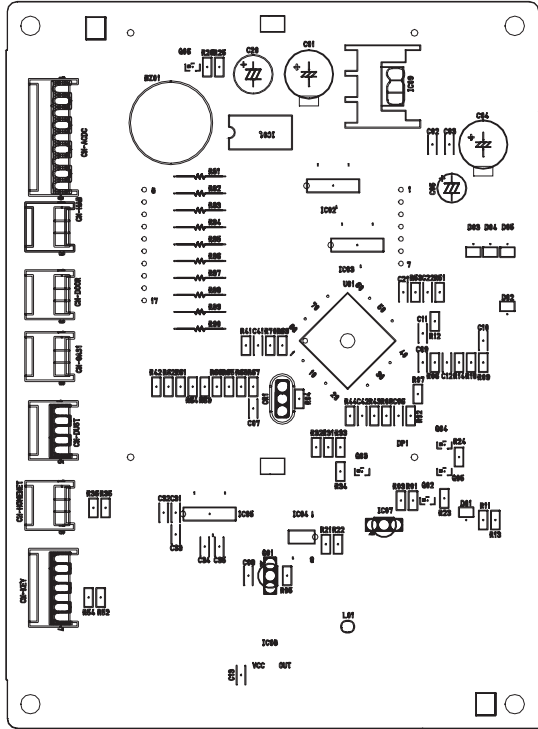


8 PCB Circuit Diagram/Parts Layouts

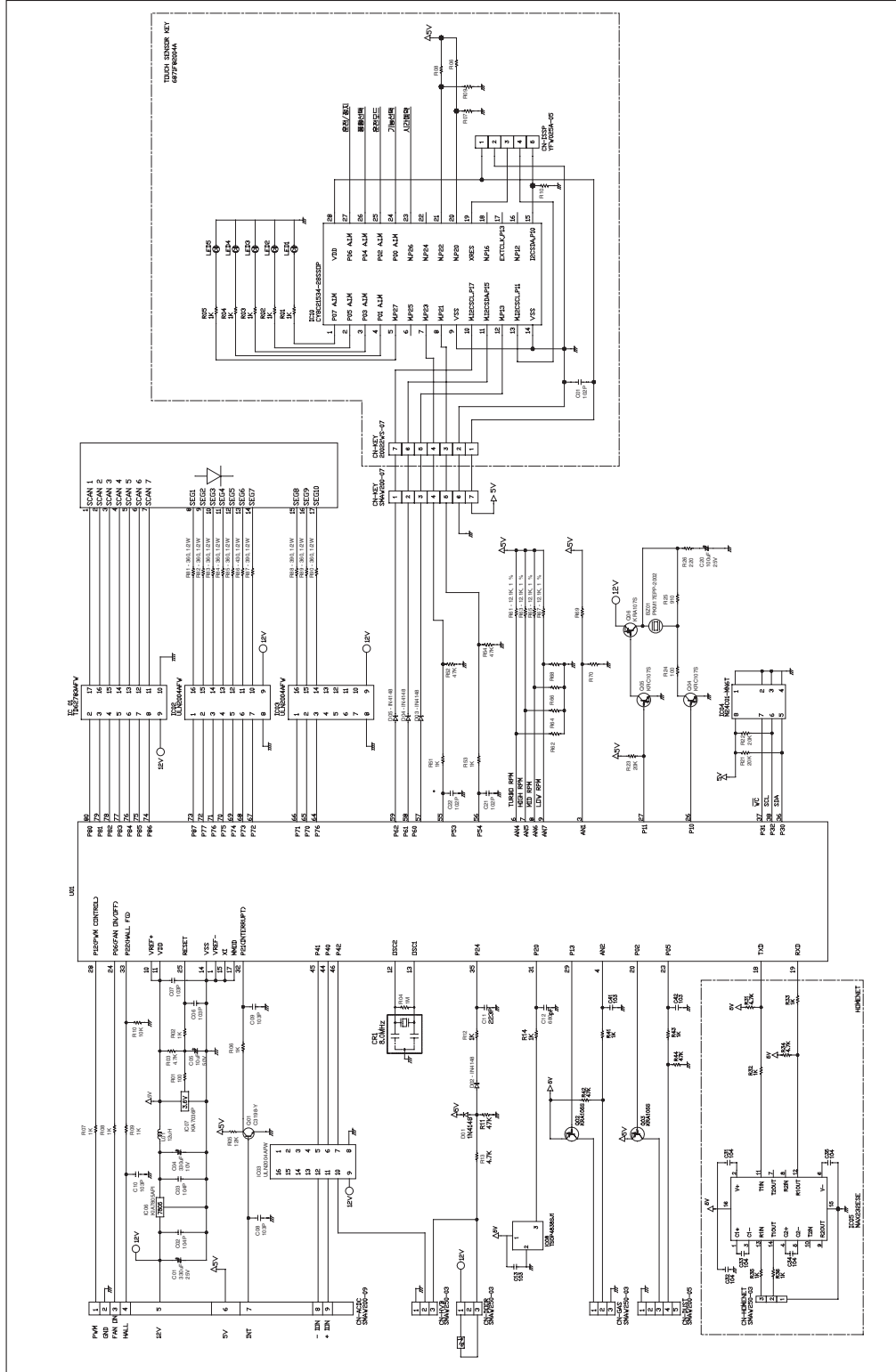
DC PART Parts Layouts (Top View)



DC PART Parts Layouts (Bottom View)

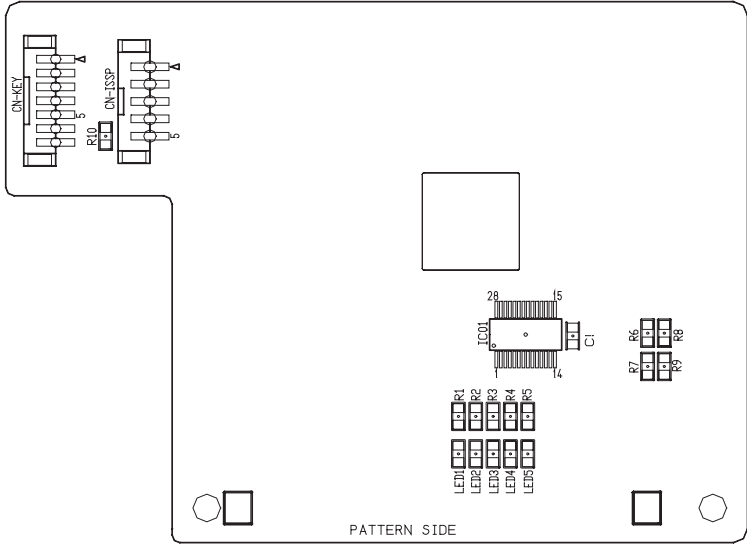


DC PART Circuit Diagram

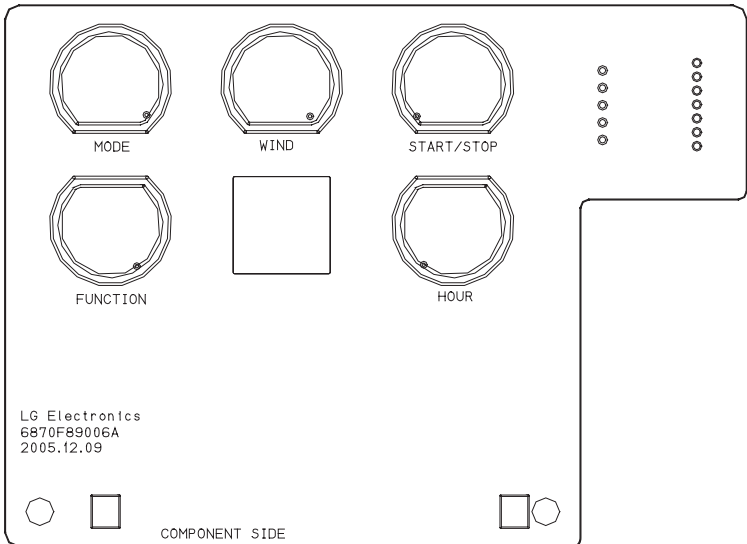


8 PCB Circuit Diagram/Parts Layouts

Touch Key Circuit Diagram



<BOTTOM VIEW>

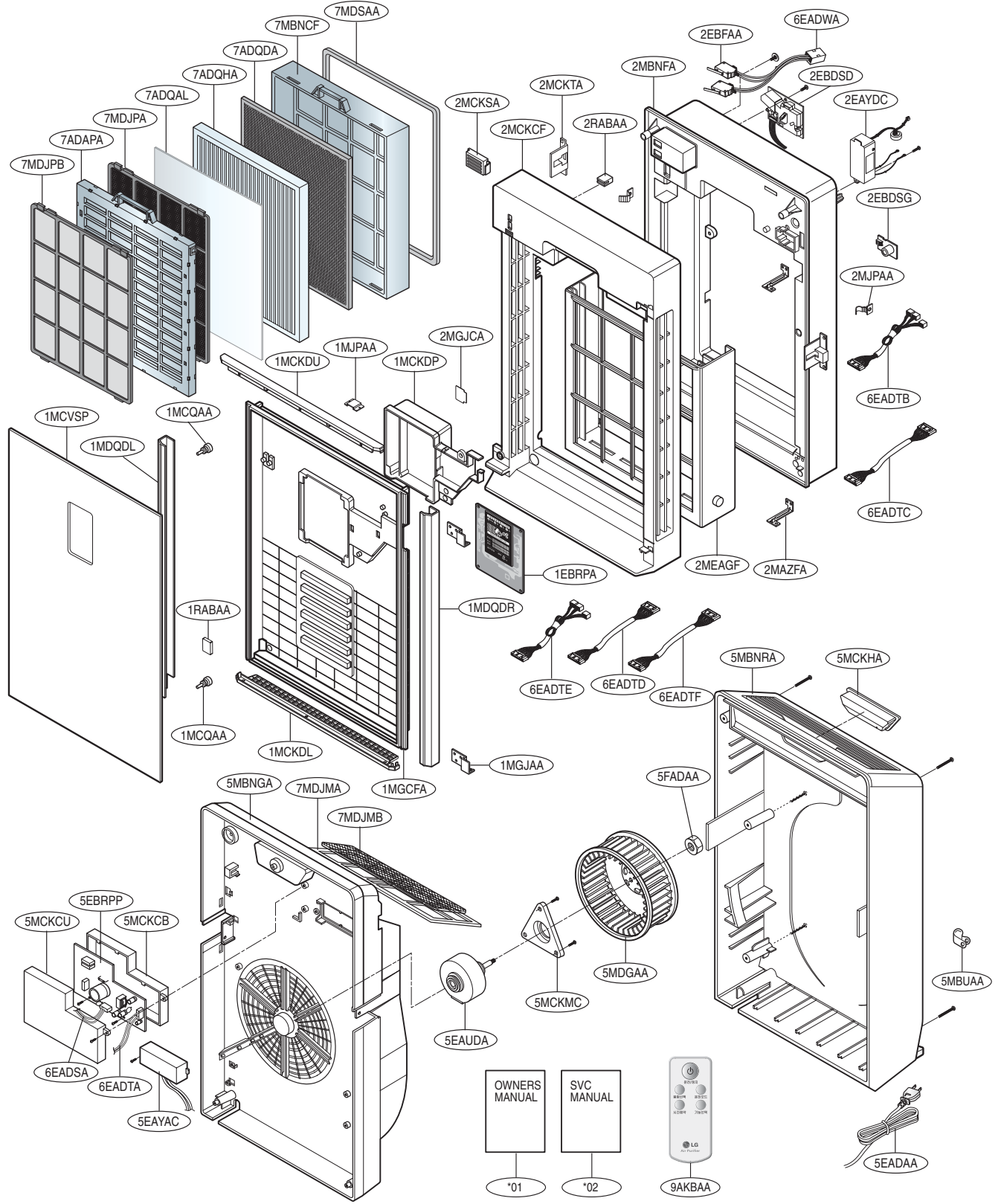


<TOP VIEW>

9 Exploded View/ Svc Components inventory

Exploded View

MODEL : PS-N550WP





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