

SHARP SERVICE MANUAL

No.S9813FPJ40EW_T



AIR PURIFIER

MODELS **FP-J40E-W**
FP-J40L-W
FP-J40M-W
FP-J40TA-W
FP-J40Y-W

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used

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SAFETY INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

When using electrical appliances, basic safety precautions should be followed, including the following:

WARNING - To reduce the risk of electrical shock, fire or injury to persons:

- Read all instructions before using the unit.
- Use only a 220-240 volt (FP-J40E/J40L/J40Y/J40M) and 200 volt (FP-J40TA) outlet.
- **Do not use the unit if the power cord or plug is damaged or the connection to the wall outlet is loosened.**
- Periodically remove dust from the power plug.
- **Do not insert fingers or foreign objects into the air intake or air outlet.**
- **When removing the power plug, always hold the plug and never pull the cord.**
Electrical shock and/or fire from short circuit may occur as a result.
- Be careful not to damage the power cord, it may cause electric shock, excess heat or fires.
- **Do not remove the plug when your hands are wet.**
- **Do not use this unit near gas appliances or fireplaces.**
- **Remove the power plug from the wall outlet before cleaning the unit and when not using the unit.**
Electrical shock from bad insulation and/or fire from short circuit may occur as a result.
- When cleaning the unit, or when the unit is not in use, be sure to unplug the unit. Electrical shock and/or fire from a short circuit may result.
- **If the power cord is damaged, it must be replaced by the manufacturer, its service agent, Sharp Approved Service Center or similarly qualified person in order to avoid a hazard.**
- Do not operate when using aerosol insecticides or in rooms where there is oily residue, incense, sparks from lit cigarettes, chemical fumes in the air or in very high humidity conditions, such as a bathroom.
- Be cautious when cleaning the unit. Corrosive cleansers may damage the exterior.
- Only a Sharp Authorized Service Center should service this air purifier. Contact the nearest Service Center for any problems, adjustments, or repairs.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

NOTE - Radio or TV Interference

If this air purifier should cause interference to radio or television reception, try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the unit and radio/TV/wave-clock receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTIONS CONCERNING OPERATION

- Do not block the intake and/or air outlet.
- Do not use the unit near or on hot objects, such as stoves or heaters or where it may come into contact with steam.
- Do not lay the unit down when using.
- **Always hold the handle on the back of the unit when moving it.**
- Do not use without the filter inside the unit.
- **Do not wash and reuse the HEPA filter.**
Not only does it not improve filter performance, it may cause electric shock or malfunction.

INSTALLATION GUIDELINES

- **When using the unit, place it away from equipment utilizing electric waves such as televisions or radios to avoid electrical interference.**
- **Avoid use in locations where furniture, fabrics or other items may come in contact with and restrict the air intake and/or air outlet.**
- **Avoid use in locations where the unit is exposed to condensation or drastic temperature changes. Appropriate conditions are when room temperature is between 0 – 35 °C.**
- **Place on a stable surface with sufficient air circulation.**
When placing the unit on a heavily carpeted area, the unit may vibrate slightly.
- **Avoid locations where grease or oily smoke is generated.**
The unit surface may crack as a result.
- **Place the unit about 30 cm(1 ft) away from the wall in order to ensure proper airflow.**
The dust collecting performance will be the same even if using the unit 3cm away from the wall, but place it as far as possible(30cm away recommended) because it may dirty the wall or floor around.

FILTER GUIDELINES

- Follow the instructions in this manual for correct care and maintenance of the filter.

PRECAUTIONS FOR USING LEAD-FREE SOLDER

■ ADOPTION OF LEAD-FREE SOLDER

This model uses lead-free solder. The LF mark indicates lead-free solder and appears on circuit boards and in the service manual. The letter following the LF mark indicates the type of lead-free solder.

(Example)



Indicates lead-free solder of tin, copper and nickel

■ USING LEAD-FREE SOLDER

When soldering to repair a lead-free solder board, use a lead-free solder. Do not use conventional lead solder, as this may cause accidents and failures due to cracking. The melting point of lead-free solder (Sn-Cu-Ni) is 45°C higher than lead solder, and thus it is recommended that you use a special soldering iron. If you do not know where to obtain lead-free solder and a suitable soldering iron, please contact your nearest SHARP service center or service branch.

■ SOLDERING WORK

The melting point of lead-free solder (Sn-Cu-Ni) is approximately 225°C, 45°C higher than conventional solder, and wettability is not as good. For this reason there is a tendency to keep the soldering iron in contact with the board for a long time. However, this may cause lifted lands and heating in excess of the heat tolerance of components, and thus the soldering iron should be removed from the board as soon as you have verified that a bond has formed. Lead-free solder has a higher proportion of tin, which causes increased corrosion of the tip of the soldering iron, and thus care should be taken to turn off the soldering iron whenever it is not in use. Any different type of solder remaining on the tip of the soldering iron will form an alloy with lead-free solder, thus the tip should be cleaned after you have finished soldering. If the tip of the soldering iron turns a dark color while you are soldering, clean the tip with steel wool or fine-grained sandpaper.

APPLICABLE CIRCUIT BOARDS

MODEL NAME	PART CODE	PART NAME
FP-J40E FP-J40L FP-J40M	DPWB-B308KKKZ	FPJ40L PS UNIT
	DPWB-B309KKKZ	FPJ40L CNTL UNIT
FP-J40TA FP-J40Y	DPWB-B308KKKZ	FPJ40L PS UNIT
	DPWB-B325KKKZ	FPJ40TA CNTL UNIT

CHAPTER 1. PRODUCT SPECIFICATIONS

[1] SPECIFICATION

Power supply		E/L/M/Y:220-240V 50-60Hz TA: 220V 50Hz		
Fan Speed Operation	Fan Speed Adjustment	MAX	MED	SLEEP*1
	Fan Speed	240m3/hour	186m3/hour	48~120m3/hour
	Noise Level	45dBA	39dBA	15~30dBA
	Rated Power	23W	14W	3.5~7.5W
	Standby Power	0.9W		
Recommended Room Size		~30m2 *2		
High density Plasmacluster ion recommended room size		~23m2 *3		
Cord Length		2.0m		
Dimensions		390mm(W)x270mm(D)x583mm(H)		
Weight		6.2kg		
Control panel		Power ON/OFF, Plasmacluster ON/OFF,MODE, HAZE, TIMER		
Indication lamp / Operation mode		Fan Speed Indicator (SLEEP, Med, Max), Plasmacluster ion ON/OFF, HAZE ON/OFF,Timer (2h, 4h, 8h), Replace filter		
Replace the filter *2		Filter: about 2 years after opening		
Option		Replacement filter FZ-F50HFE, FZ-F50DFE		

*1 The fan speed is automatically switched depending on the amount of impurities in the air and room brightness.

*2 Size of a room which is appropriate for operating the main unit at maximum fan speed.

• It indicates the space where a certain amount of dust particles can be removed in 30 minutes(JEM1467).

*3 Size of a room in which approximately 7000 ions can be measured per cubic centimeter in the center of the room (at a height of approximately 1.2 meters from the floor) when the product is placed next to a wall and run at the MED operation position.

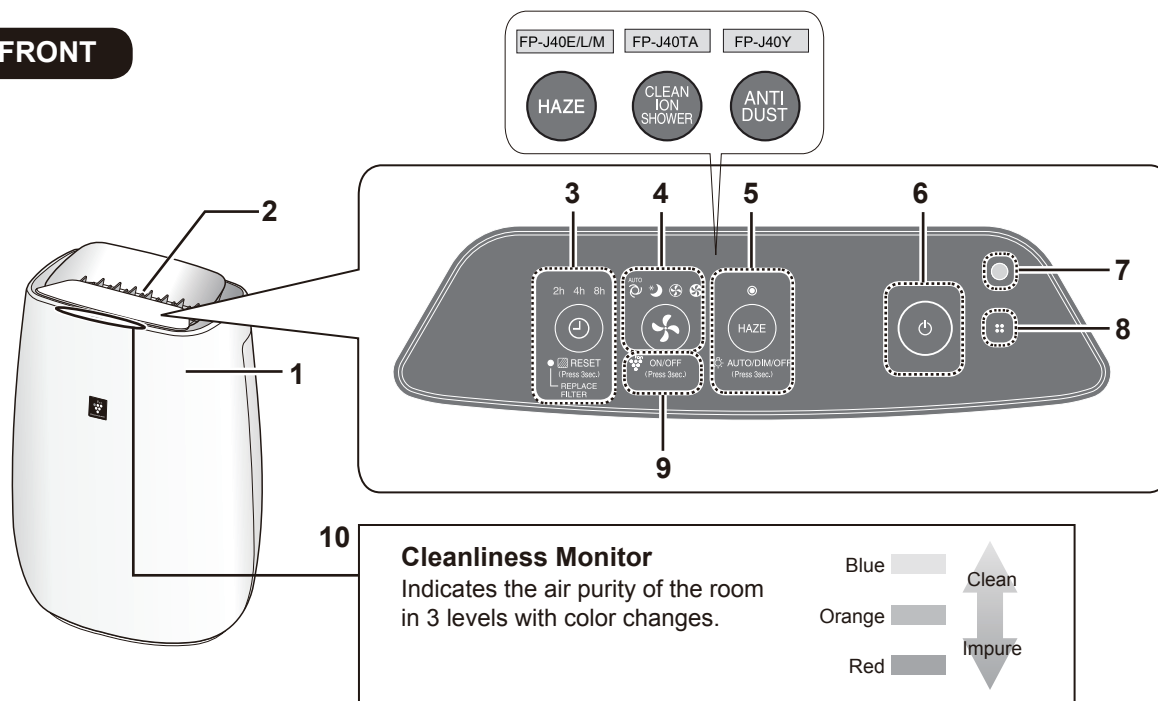
Standby Power

In order to operate the electrical circuits while the power plug is inserted in the wall outlet, this product consumes of standby power.

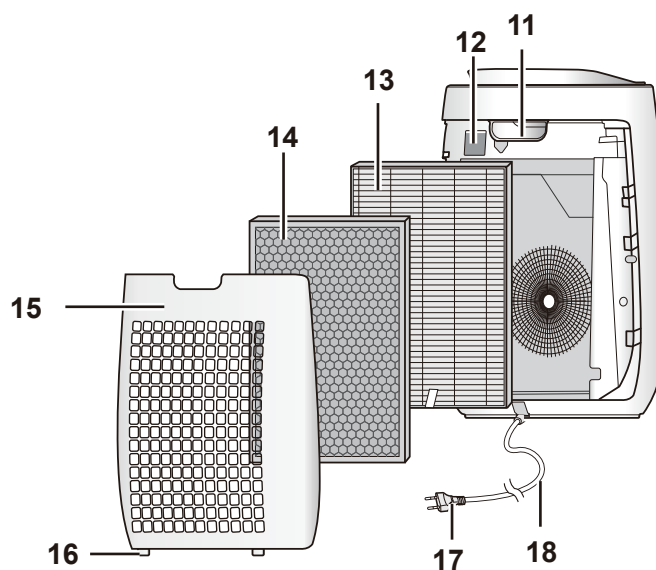
For energy saving, unplug the power cord when the main unit is not in use.

[2] APPLIANCE VIEW

FRONT



BACK



1	Main Unit	9	Plasmacluster Ion Light (blue)
2	Air Outlet	10	Cleanliness Monitor
3	OFF TIMER Button, Indicator Light (white) (Press 3 sec.) Filter Reset Button, Indicator Light (orange)	11	Handle
4	MODE Button, Indicator Light (white) (Press 3 sec.) Plasmacluster Ion ON/OFF Button	12	Dust Sensor Filter
5	HAZE Button, indicator Light (white) (Press 3 sec.) Light Control Button	13	HEPA Filter
6	POWER ON/OFF Button	14	Deodorizing Filter
7	Light Sensor	15	Back Panel (Pre-Filter)
8	Odor Sensor	16	Bottom Tabs
		17	Plug (Shape of plug depends on country.)
		18	Power Cord

CHAPTER 2. PRODUCT OVERVIEW

[1] THE CAUTIONS ON USE

1. THE METHOD OF EFFECTIVE INSTALLATION

The air purifier is designed to remove air-suspended dust and odor, but not harmful gases (for example, carbon monoxide contained in cigarettes smoke). If the odor sources still exist, it cannot completely remove the odor. (for example, odors from construction materials and pet odors).

It is suggested to open the window a bit when you are smoking in order to facilitate ventilation.

2. PRECAUTIONARY INFORMATION

Please follow these precautions when using the air purifier. Failure to do so may damage the unit and/or cause an accident (fire, electrical shock, injury).

- Do not use the air purifier as a ventilation fan or stove exhaust fan.
- Do not insert your fingers or other objects into the air intake, air outlet, or filter case.
- The high-voltage components and rotating fan parts inside the air purifier are extremely dangerous.
- Do not use the air purifier in a humid environment.
- Do not use the air purifier when placed on top of or located close to heating equipment.
- Do not allow flammable substances to enter the air purifier.
- Do not block the air purifier's air intake or air outlet.
- Do not knock over or drop the air purifier.
- Always ventilate closed rooms.
- The air purifier does not function to provide ventilation or remove carbon monoxide.

[2] REPLACING THE AIR PURIFIER'S FILTER

1) FILTER SERVICE LIFE TIMES

Service lifetimes for the air purifier's filter in a normal residential setting are as follows:

- HEPA Filter : About 2 years after opening

These estimates indicate the period over which the air purifier's ability to absorb odors and collect dust will be reduced by 50% in an operating environment where 5 cigarettes are smoked daily (based on Japan Electrical Manufacturers' Association standard JEM 1467). These service lifetimes are provided for reference purposes only. Depending on the conditions in which the air purifier is operated, filter performance may deteriorate within several months. It is recommended to replace the unit's filter as soon as any unpleasant odors become noticeable.

2) HOW FREQUENTLY TO REPLACE FILTER

How frequently the air purifier's filter will need to be replaced depends on where the unit is being used.

3) FILTER WILL NEED TO BE REPLACED MUCH MORE FREQUENTLY UNDER THESE CIRCUMSTANCES

When the purifier is used in proximity to soot or carbonized substances. When the purifier is used in an office or business setting, such as a restaurant, mahjong parlor, barbershop, or hair salon.

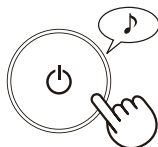
4) THE OPTIONAL FILTER FOR EXCHANGE

MODEL: FZ-F50HFE, FZ-F50DFE

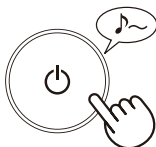
[3] ABOUT THE FUNCTION

START/STOP

START



STOP



- Select the desired fan speed.
- When the main unit starts operation, the operation starts in the previous mode it was operated in.
(Except CLEAN ION SHOWER and ANTI DUST mode)

HAZE

Only FP-J40E/L/M

The main unit operates at HIGH fan speed for 60 minutes and then alternates between Low and High level for 20 minutes each.



10 minutes: Max High fan level
50 minutes: High fan level
20 minutes: Low fan level
20 minutes: High fan level

NOTE

- The Plasmacluster Ion can not be turned "OFF".
- It is possible to switch this mode to another while operating.
However, the HAZE mode will not function after switching mode.


CLEAN ION SHOWER

Only FP-J40TA

The main unit releases Plasmacluster ions with strong airflow and collects dusts while decreasing static electricity for 10 minutes. After that, the DUST sensor sensitivity is automatically increased and quickly detects impurities and cleans the air powerfully for 50 minutes.



NOTE

- The Plasmacluster Ion can not be turned "OFF".
- When the operation finishes, the main unit will return to the prior operation mode.
It is able to change the other mode and  during this mode.


ANTI DUST

Only FP-J40Y

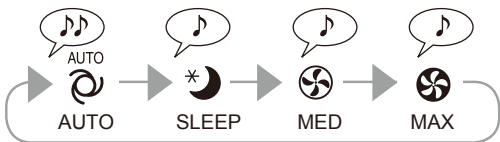
The main unit releases Plasmacluster ions with strong airflow and collects dusts while decreasing static electricity for 10 minutes. After that, the DUST sensor sensitivity is automatically increased and quickly detects impurities and cleans the air powerfully for 50 minutes.



NOTE

- The Plasmacluster Ion can not be turned "OFF".
- When the operation finishes, the main unit will return to the prior operation mode.
It is able to change the other mode and  during this mode.

FAN SPEED



NOTE

AUTO

The fan speed is automatically controlled depending on the 3 detection.
(Dust /Odor /Light)

SLEEP

The main unit will operate very quietly, and the fan speed is automatically switched depending on the amount of impurities in the air and room brightness. Cleanliness Monitor/Plasmacluster Ion Light go off automatically. Even though the indicator is off, Plasmacluster Ion is dispersed into air unless Plasmacluster Ion is turned off by

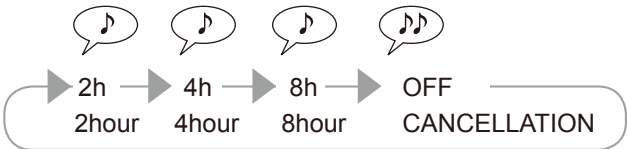
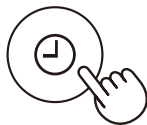


OFF TIMER

Select the length of time you want, with the main unit on. The main unit automatically stops once the selected time is reached.

(with the main unit ON)

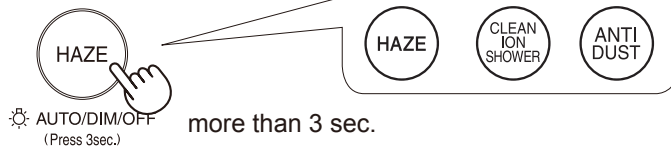
2h 4h 8h



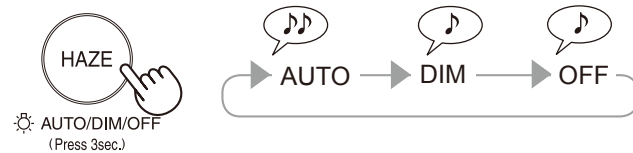
LIGHT CONTROL

You can set the Cleanliness Monitor / Plasmacluster Ion Light to OFF when their SIGN is bright.

1 (with the main unit ON)



2



NOTE

- If the HAZE Button is not pushed within 8 seconds, the setting will be saved automatically.
- When the main unit starts operation, the operation starts in the previous mode it was operated in.

AUTO

Light automatically switches ON or OFF based on room brightness.

Room is bright: light is ON

Room is dark: light is OFF

OFF

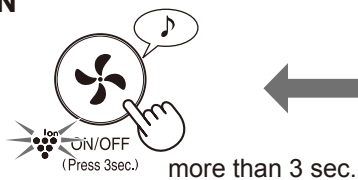
When set to "OFF", the "DIM" light illuminates for 8 seconds after operation starts and then the light turns off.

PLASMACLUSTER ION ON/OFF

When Plasmacluster Ion is ON, the Plasmacluster Ion Light will turn on. (blue)

(with the main unit ON)

ON



OFF



NOTE

- When the main unit starts operation, the operation starts in the previous mode it was operated in.

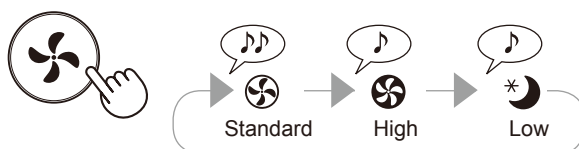
ADJUSTMENT OF SENSOR DETECTION SENSITIVITY

You can change the sensitivity of the Dust sensor / Odor sensor and the Light sensor.

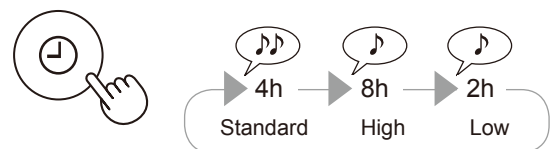
1 (with the main unit OFF)



2 Dust sensor / Odor sensor



Light sensor



3

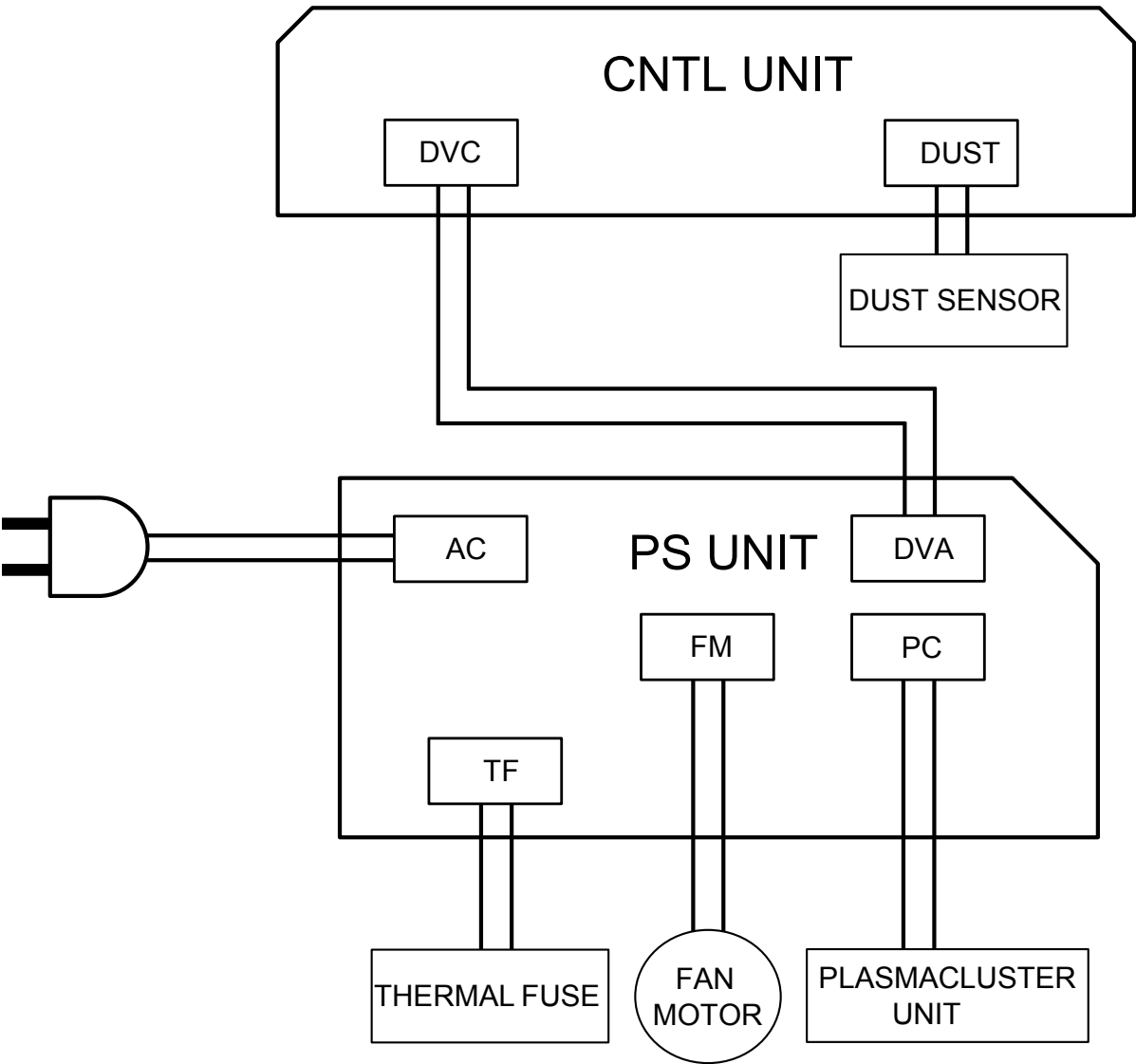


NOTE

- If the power OFF Button is not pushed within 8 seconds of adjusting sensor sensitivity, the setting will be saved automatically.
- The sensor sensitivity setting will be saved even if the main unit is unplugged.

CHAPTER 3. EXPLANATION OF CIRCUITS

[1] CIRCUIT SCHEMATIC



[2] TEST MODE

Please do it and then do [3] MEMORY RESET OPERATION before returning the product to the user.

[STEP.1] Test to turn on all LED

When start power supply while pushing the button "Timer (SW1)" and "Mode(SW2)", buzzer rings short and go to test mode.

No	loads		Indication							
1	Fan Motor	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
	FM	PCI	●	●	●	●	●	●	●	●
	ON (Max)	ON	LED10		LED13					LED15 Blue

*1 LED15(Clean sign) is on in blue.

[STEP.2] Program version test for microcomputer.

When pushing the button "Timer(SW1)", buzzer rings short and step go to STEP.2

※ The case when invalid sound (PIPIPI) rings and isn't go to STEP.2 even if "SW1" is pushed with STEP.1, is following substrate badness.

LED4 OFF:Power supply clock circuit breakdown

No	loads		Indication							
2	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
	ON (Max)	ON	Version display * refer Table 1							
			LED10		LED13					LED15 green

*2 Program version check for microcomputer ※Confirm that LED1~8 are on/off as indicated as below.

*3 LED15(Clean sign) is on in orange.

Table 1

FP-J40 E/T/M							
LED DISPLAY							
LED1 2H	LED2 4H	LED3 8H	LED4 Auto	LED5 Sleep	LED6 Mid	LED7 High	LED8 HAZE
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
X	X	X	X	X	●	●	●

FP-J40 TAY							
LED DISPLAY							
LED1 2H	LED2 4H	LED3 8H	LED4 Auto	LED5 Sleep	LED6 Mid	LED7 High	LED8 HAZE
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
X	X	X	X	●	X	X	X

[STEP.3] Temperature sensor test.

When pushing the button "Mode(SW2)", buzzer rings short and step go to STEP.3

No	loads		Indication							
3	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
	Same as STEP.2		△	x	x	x	x	x	x	x
			LED10		LED13					LED15

*4 Don't care. It is not need to check.

*5 LED13 is on. However, if the temperature sensor is abnormal, the LED 13 blinks.

[STEP.4] Illuminance sensor test.

Shield the light receiving section of illuminance sensor.

No	loads		Indication							
4	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
	Same as STEP.2		△	x	x	x	x	x	x	●
			LED10		LED13					LED15

*6 Check the Illuminance sensor. Confirm that LED8 is on.

[STEP.5] Illuminance sensor test (continued)

Open the light receiving section of the illuminance sensor.

No	loads		Indication							
5	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
	Same as STEP.2		△	x	x	x	x	x	x	x
			LED10		LED13					LED15

*7 Check the Illuminance sensor. Confirm that LED8 is off.

[STEP.6] Dust sensor test

After LED1 is on, insert the jig into the dust sensor.

No	loads		Indication							
6	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
	Same as STEP.2		●	●	●	x	x	x	x	x
			LED10		LED13					LED15

*8 Check the Dust sensor. Confirm that LED1 and LED2, LED3 are on.

[STEP.7] Gas sensor test.

After LED15(Clean sign) becomes green, spray the gas(Ethanol) on the Gas sensor.

No	loads		Indication							
	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
7	Same as STEP.2		●	●	●	x	x	x	x	x
			LED10 *4 △		LED13 ● *5					LED15 Red *9

*9 Check the Gas sensor. Confirm that LED15(Clean sign) becomes red from green when the gas sprayed on Gas senso

[STEP.8] Fan motor test.

When a fan motor holds within ± 20 rpm of the target revolutions more than three seconds, LED10 is on.

No	loads		Indication							
	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
8	Same as STEP.2		●	●	●	x	x	x	x	x
			LED10 *10 ●		LED13 ● *5					LED15 Red

*10 Check the fan motor. Confirm that LED10 is on.

[STEP.9] Abnormal noise and vibration check

When pushing the button "Mode(SW2)", buzzer rings short and step go to No.9

※If dust sensor test, gas sensor test, illuminance sensor test, tempetature sensor test, fan motor have not all passed, "Mode(SW2)" button is disabled.

No	loads		Indication							
	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
9	Same as STEP.2		x	x	x	x	x	x	●	x
			LED10 x		LED13 ●					LED15 Blue

Confirm that there is no abnormal noise and vibration.

[STEP.10] Abnormal noise and vibration check (continued)

When pushing the button "Mode(SW2)", buzzer rings short and step go to No.10

No	loads		Indication							
	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
10	ON (Min) *11 *12	ON	x	x	x	x	● *12	x	x	x
			LED10 x		LED13 ●					LED15 Blue

*11 Since switching to the fan's min operation, check that there is no abnormal noise and vibration.

*12 Furthermore, every time pushing the button "Mode(SW2)", fan's operation switches to "max → min → max → min → ...", and lamps LED 7 and LED 5 are switched accordingly.

[STEP.11] Amount of ion measurement, power consumption measurement

When pushing the button "HAZE(SW3)", buzzer rings short and step go to No.11

No	loads		Indication							
	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
11	ON (Max) *13	ON	x	x	x	x	x	x	x	●
			LED10 x		LED13 ●					LED15 Blue

*13 Since switching to the fan's max operation, confirm following points in this state.

- ① Confirm that the amount of ion satisfies the standard.
- ② Confirm that the power consumption satisfies the standard

[STEP.12] Initialization of setting data, Fan motor rotational speed (Low) check

When pushing the button "HAZE(SW3)", buzzer rings short and step go to No.10.

In this time, the setting data of microcomputer ROM is initialized.

No	loads		Indication							
	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
12	ON (Min) *14	ON	x	x	x	●	●	●	x	x
			LED10 x		LED13 ●					LED15 Blue

*14 Since switching to the fan's min operation, check that the wind volume decreases.

[STEP.13] Exit test mode

When pushing the button "POWER(SW5)", buzzer rings long and exit test mode.

No	loads		Indication							
	FM	PCI	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
13	OFF	OFF	x	x	x	x	x	x	x	x
			LED10 x		LED13 x					LED15 x

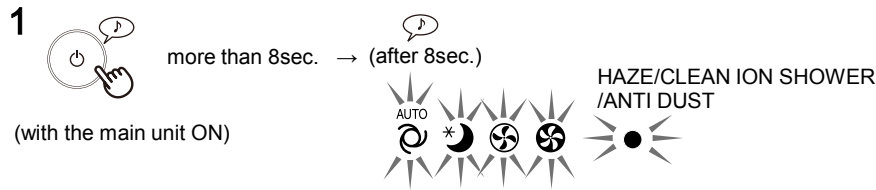
All lamps are off.

The fan motor and PCI stop.

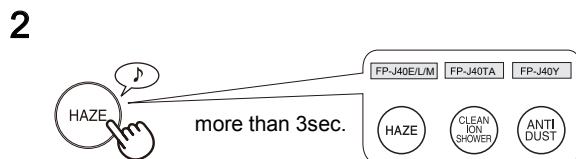
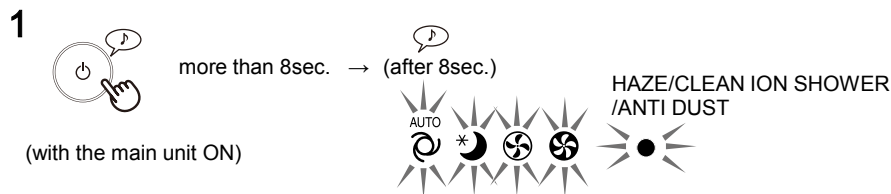
[3] MEMORY RESET OPERATION

Please do it before returning the product to the user, as needed.

Factory Reset



User Settings Reset



[4] ERROR MODE

Overview

Error mode is a self-diagnostic function that uses sensors to detect abnormal conditions and failures in the unit and circuits, and executes load operation and error displays based on what is detected. The unit has 1 error mode.

1. Fan motor rpm error

1) Overview

Error mode that activates when locking of the fan motor or an open connector is detected.

This error mode activates when the rpm of the fan motor is detected to be 0rpm consecutively for 15 seconds.

2) Detection time

During all modes when unit is running.

3) Error display

"Sleep lamp" flashes in a 1-second cycle. All other LEDs are off.

4) Load operation

All loads are immediately turned off and operation is stopped. The buzzer does not sound.

5) Switch operation

It is possible that this error mode is canceled, when the "power" button is pushed.

However, it becomes same error mode if the cause is not removed.

6) Solution

Verify that the connector of the fan motor is inserted, Otherwise, replace the fan motor or the circuit board.

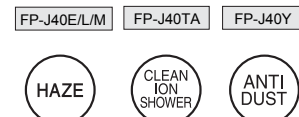
CHAPTER 4. TROUBLESHOOTING GUIDE


- Always use the designated parts when replacing parts.
- Service of the PWB ass'y:
The electrical circuit is composed of the Control PWB ass'y (CNTL UNIT), and the Power supply PWB ass'y (PS UNIT).

No.	Problem	Cause and symptoms	Solution
1	The purifier will not operate.	Faulty wiring.	Check whether connectors are inserted properly; repair; replace.
		Fan feels unusually heavy when rotated manually (motor failure + PWB current fuse burned out).	Replace motor and PWB.
		Power supply PWB assembly current fuse (FUSE1) burned out.	Inspect the motor (rotate the fan manually and replace motor and PWB if fan feels heavy).
		Power supply PWB assembly current fuse (FUSE1) burned out and varistor (VRS1) failure.	Replace PWB.
		Faulty PWB.	Replace.
		Broken connection in power cord.	Replace.
2	The purifier is making an unusual noise.	Faulty motor.	Replace.
		Faulty motor mount	Repair.
		Faulty fan shape	Replace.
		Faulty fan mount	Repair or Replace.
		Sound discharge from Plasmacluster unit	Nothing is wrong when the sound hurts feelings, please keeps away the commodity.
3	The sound from Plasmacluster unit becomes sparse.	Change in humidity.	Nothing is wrong the problem is not in the effect.
4	The air purifier's ability to collect dust has deteriorated.	Filter replacement is overdue.	Replace the filter.
		The prefilter has become clogged.	Clean the prefilter.
		There is an obstruction near the air inlet or outlet.	Move the air purifier to a different location.
5	The air coming from the air outlet smells bad.	Undesirable odours that have accumulated in the filter are being released.	Replace The filter.
6	The air purifier resets itself immediately.	Faulty PWB.	Replace PWB.
7	Malfunction of the keys.	The PWB is defective.	Replace.
		The unit is not assembled properly.	Repair or Replace.
		The key remains pressed down.	Repair.

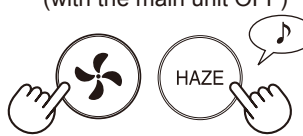
This symptom	Does not indicate a problem with the air purifier.
The purifier is making clicking noise.	This sound is produced when plasmacluster ions are being generated.
Sometimes a clicking sound is audible coming from the purifier; sometimes, it is not.	While this sound may grow louder or softer and may even become almost inaudible depending on the humidity of the room where the air purifier is being used, the plasma- cluster ion effectiveness remains the same.
The purifier is having difficulty removing odors and smoke from the air.	Did you remove the filter from its plastic bag before installing it?
	Is the filter excessively dirty? If so, clean or replace it as necessary.
The air coming out of the purifier smells bad.	Is the filter excessively dirty? If so, clean or replace it as necessary.
	Sometimes ozone from the cluster ion generator produces a noticeable odor. This odor is not dangerous to your health.

TROUBLESHOOTING




SYMPTOM	REMEDY (not a malfunction)
Odors and smoke are not removed.	<ul style="list-style-type: none"> Replace the filters if they appear to be heavily soiled.
The Cleanliness Monitor illuminates blue even when the air is impure.	<ul style="list-style-type: none"> The air could be impure at the time the main unit was plugged in. Unplug the main unit, wait one minute, and plug the main unit in again.
The Cleanliness Monitor illuminates orange or red even when the air is clean.	<ul style="list-style-type: none"> Sensor operation is affected if the dust sensor openings are dirty or clogged. Gently clean the dust sensor openings.
A clicking or ticking sound is heard from the main unit.	<ul style="list-style-type: none"> Clicking or ticking sounds may be audible when the main unit is generating ions.
The discharged air has an odor.	<ul style="list-style-type: none"> Check to see if the filters are heavily soiled. Clean or replace the filters. Plasmacluster Air Purifiers emit small traces of ozone which may produce an odor.
The main unit does not operate properly when cigarette smoke is in the air.	<ul style="list-style-type: none"> Is the main unit installed in a location that is difficult for the sensor to detect cigarette smoke? Is the dust sensor opening blocked or clogged? (In this case, clean the opening.)
The Cleanliness Monitor is turned off.	<ul style="list-style-type: none"> Check to see if the Lights OFF Mode selected. Press  for 3 seconds to light On. Check to see if the SLEEP mode is selected. The Cleanliness Monitor/ Plasmacluster Ion Light are turned off automatically after the SLEEP mode is selected.
The Cleanliness Monitor lights change color frequently.	<ul style="list-style-type: none"> The Cleanliness Monitor lights automatically change colors as impurities are detected by the dust sensor.
The SLEEP lamp is flashing.	<ul style="list-style-type: none"> Fan motor error. Turn the power OFF. Wait one minute, and then turn the power ON.
AUTO RESTART After a power failure, automatically resume the operation when the power recovers.	Auto Restart can be set. <ul style="list-style-type: none"> Even when the plug is unplugged or the breaker is thrown during the operation, the operation resumes at the previous operation mode and settings if the power recovers.

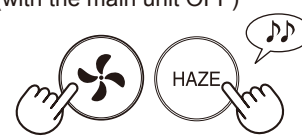
ON
(with the main unit OFF)




(simultaneously for more than 3 sec.)







OFF
(with the main unit OFF)



(simultaneously for more than 3 sec.)



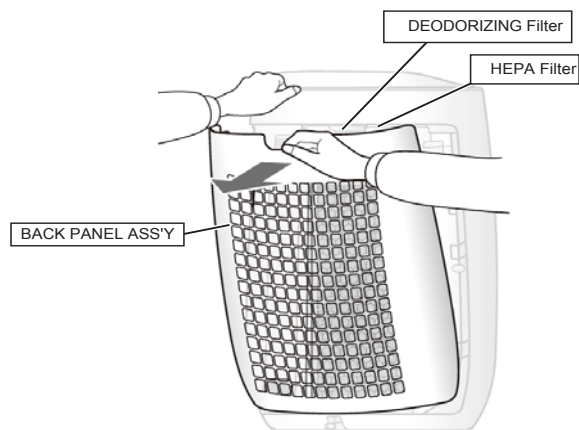
 If the , , ,  lamp Lights up for 8 seconds, the setting is completed.

CHAPTER 5. REPLACEMENT OF MAIN PARTS

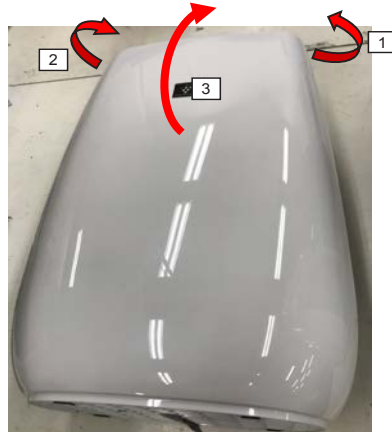
[1] REPLACEMENT PROCEDURE

CAUTION: Remove the plug from the power outlet before servicing/disassembling the unit (danger of electrical shock).

1. Removing BACK PANEL, DEODORIZING FILTER and HEPA FILTER

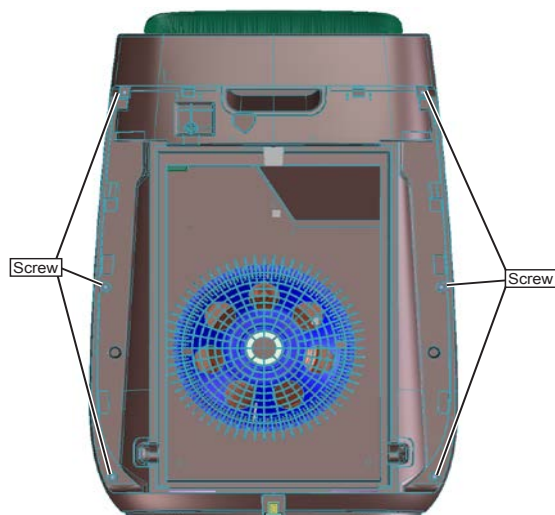


3) Remove the FRONT CABINET from the main body.



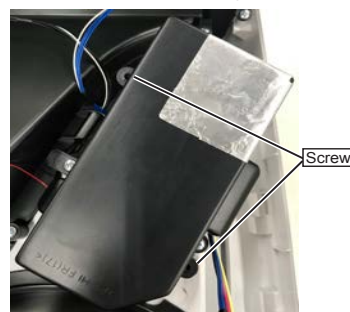
2. Removing the FRONT CABINET

1) Remove six (6) screws from the BACK CABINET.



3. Removing PWB BOX and PWB (Power Supply unit)

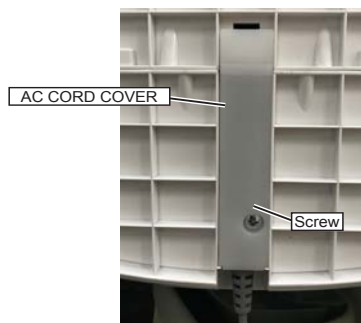
1) Remove the two (2) screws holding the PWB UPPER BOX ASS'Y.



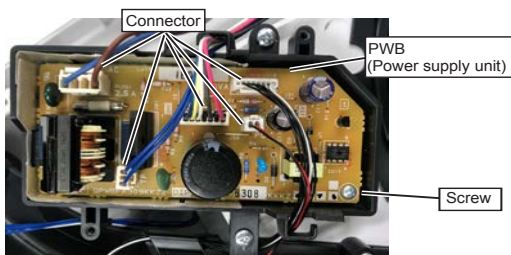
2) Lift the PWB UPPER BOX ASS'Y and remove it.



2) Remove the one (1) screw from bottom side of the BACK CABINET. And remove the AC CORD COVER.

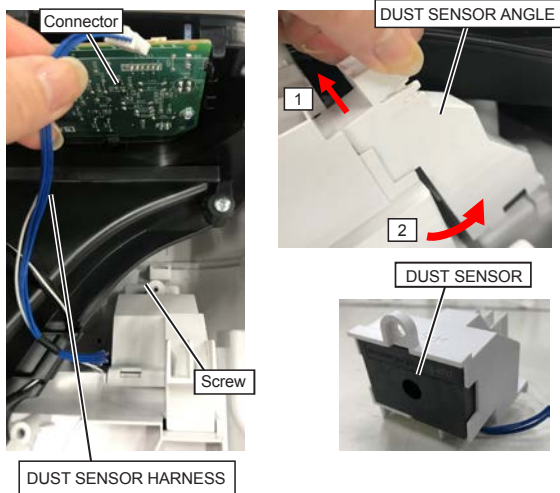


3) Disconnect the connectors on PWB and remove the one (1) screw holding the PWB. Now, PWB is free.



4. Removing DUST SENSOR

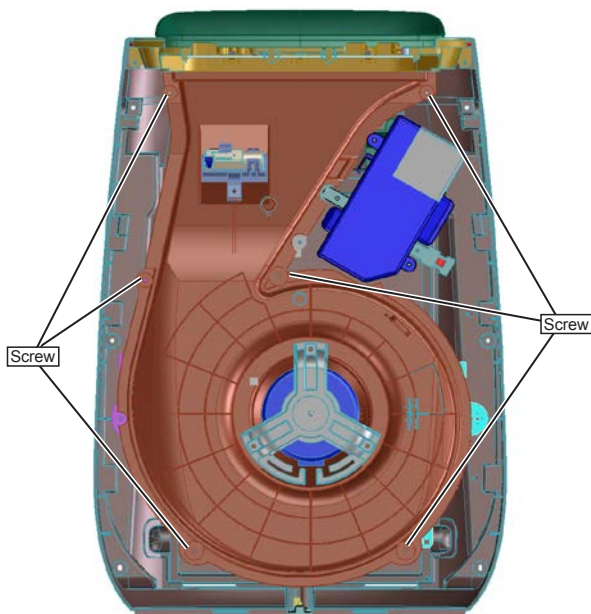
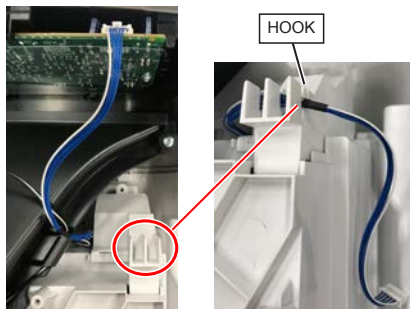
- 1) Disconnect the connector of DUST SENSOR HARNESS and remove the one (1) screws fixing DUST SENSOR ANGLE.
- 2) Pick up DUST SENSOR ANGLE.



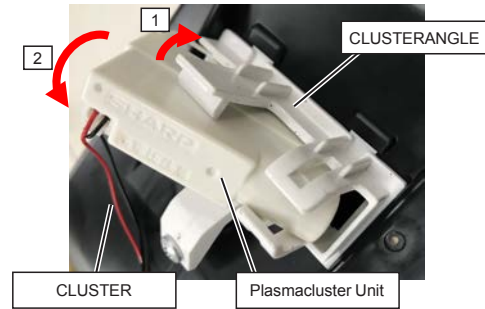
5. Removing Casing

- 1) Remove the six (6) screws fixing Casing.
- 2) Pick up Casing.

NOTICE: If you decompose without removing the DUST SENSOR ANGLE, hook the DUST SENSOR HARNESS on this rib.

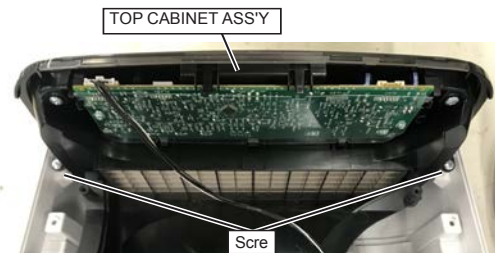


6. Pick up Plasmacluster Unit



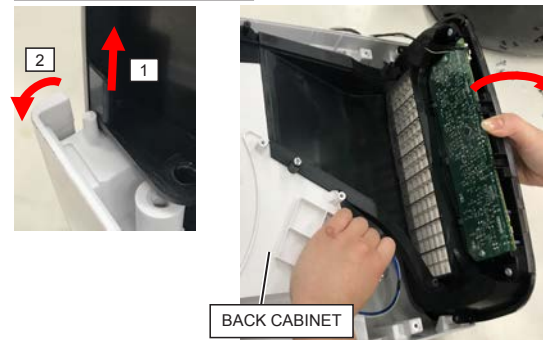
7. Removing TOP CABINET, REAR LOUVER, and PWB(control unit) and LED SHEET.

- 1) Remove the two (2) screws fixing TOP CABINET ASS'Y.

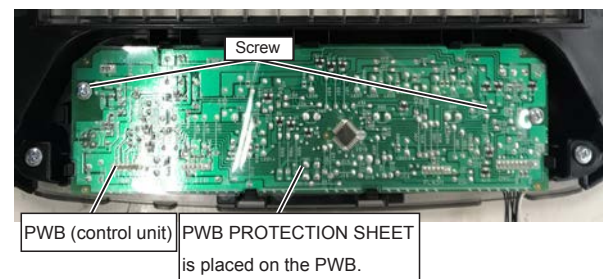


- 2) Remove TOP CABINET ASS'Y with PWB(control unit). While lifting the ASS'Y, support the BACK CABINET with one hand.

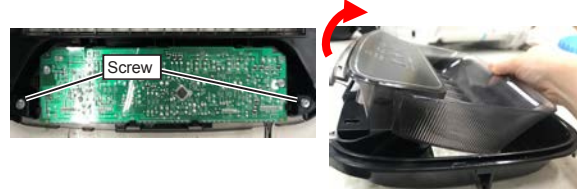
NOTICE: Carry out both sides.



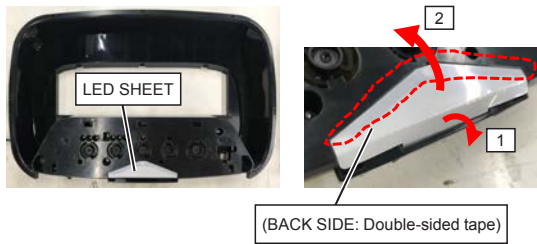
- 3) Remove two (2) screws and take PWB (control unit) out from TOP CABINET.



- 4) Remove two (2) screws and take REAR LOUVER out from TOP CABINET.

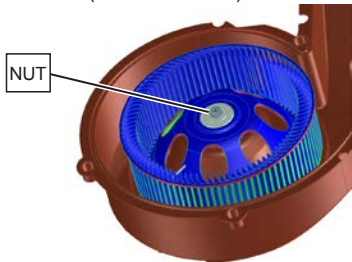


5) Peel off LED SHEET from the TOP CABINET.

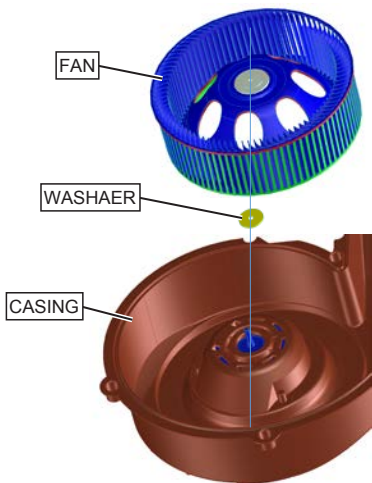


8. Removing Fan

1) Remove the NUT (Left-handed nut).

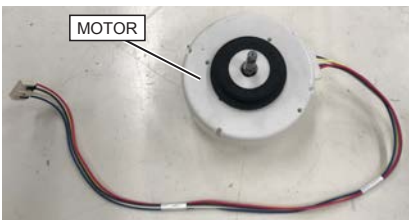
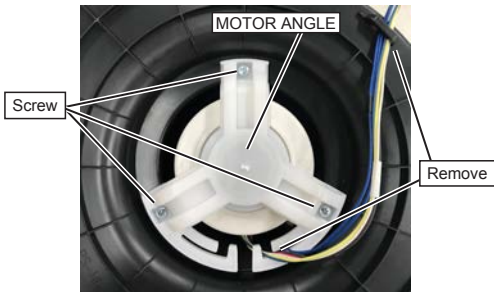


2) Remove FAN and WASHER.

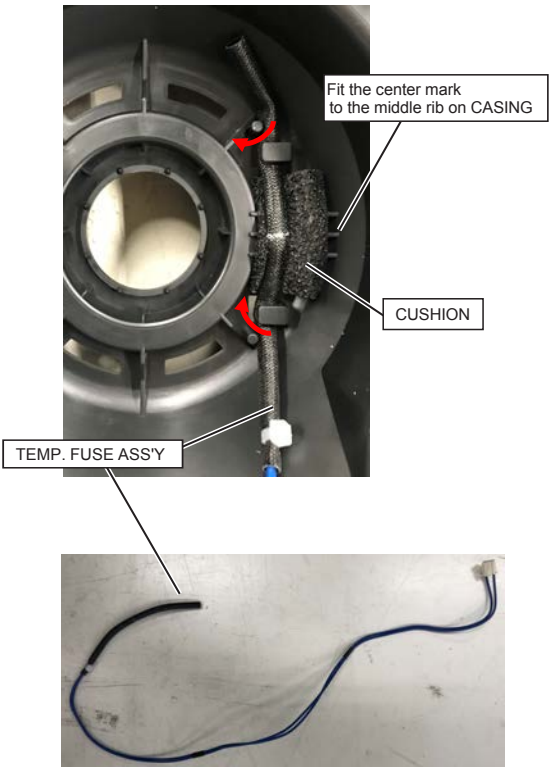


9. Removing DC MOTOR and TEMP.FUSE ASS'Y

1) Remove the harnesses from hooks and the three (3) screws fixing MOTOR ANGLE. And then take MOTOR ANGLE out from CASING. Now, MOTOR is free.

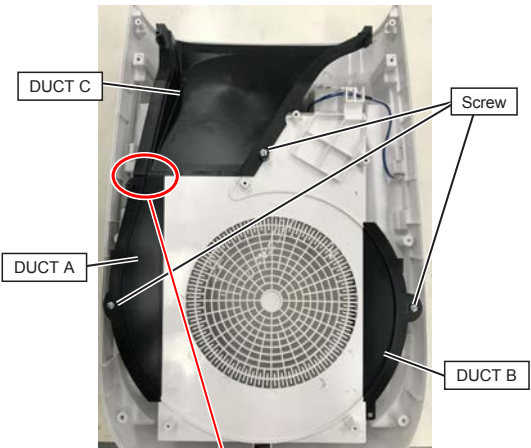


Now, TEMP.FUSE ASS'Y is free.



10. Removing DUCT A,B and C.

1) Remove the two (3) screws fixing DUCT A-C and take DUCT A-C. Now, DUCT A-C are free.



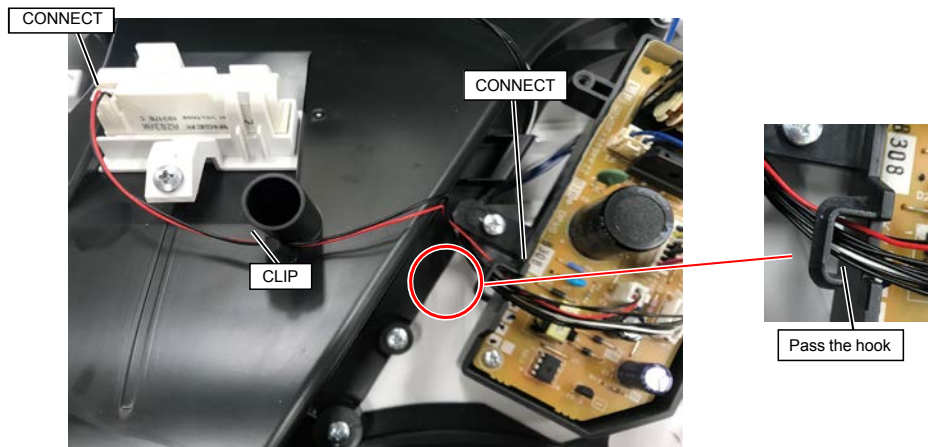
To remove DUCT A, first remove DUCT C.



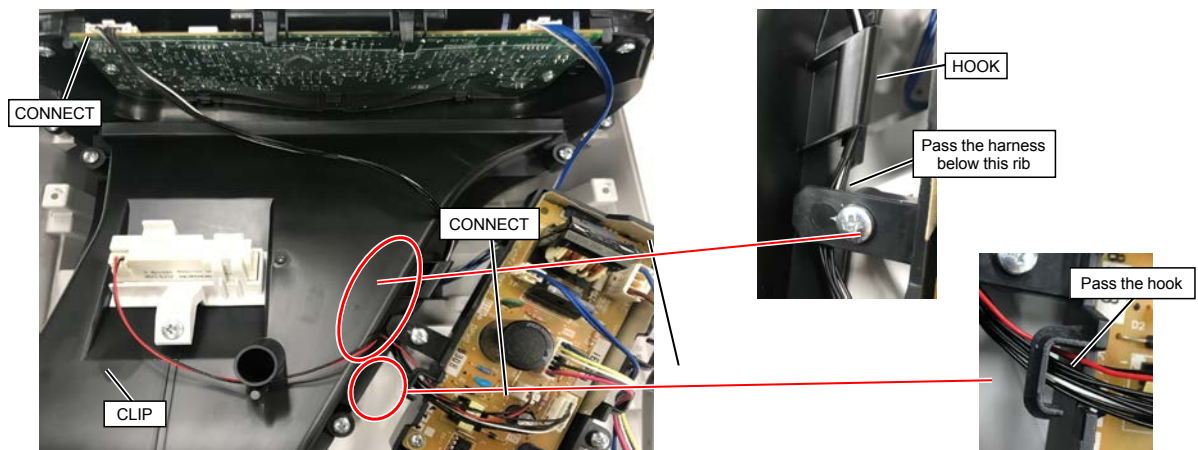
[2] WIRING OF COMPONENTS

CAUTION: Remove the plug from the power outlet before servicing/disassembling the unit (danger of electrical shock).

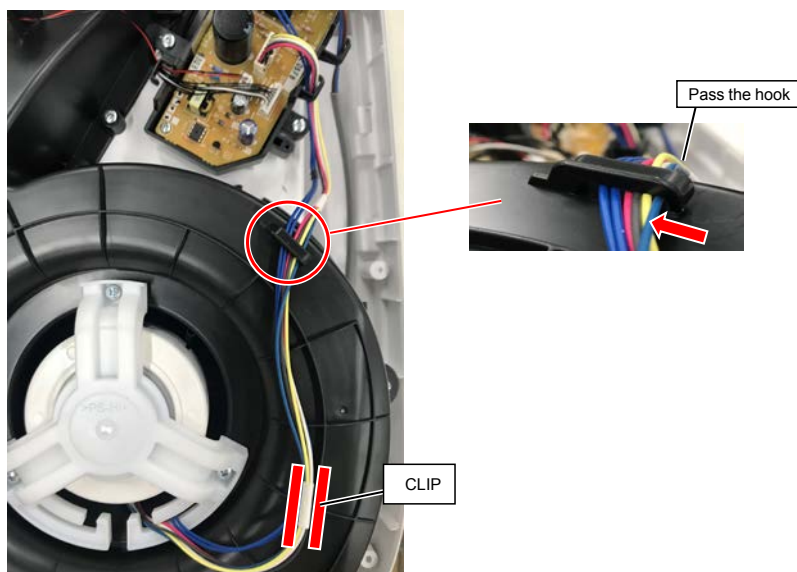
1. CLUSTER HARNESS



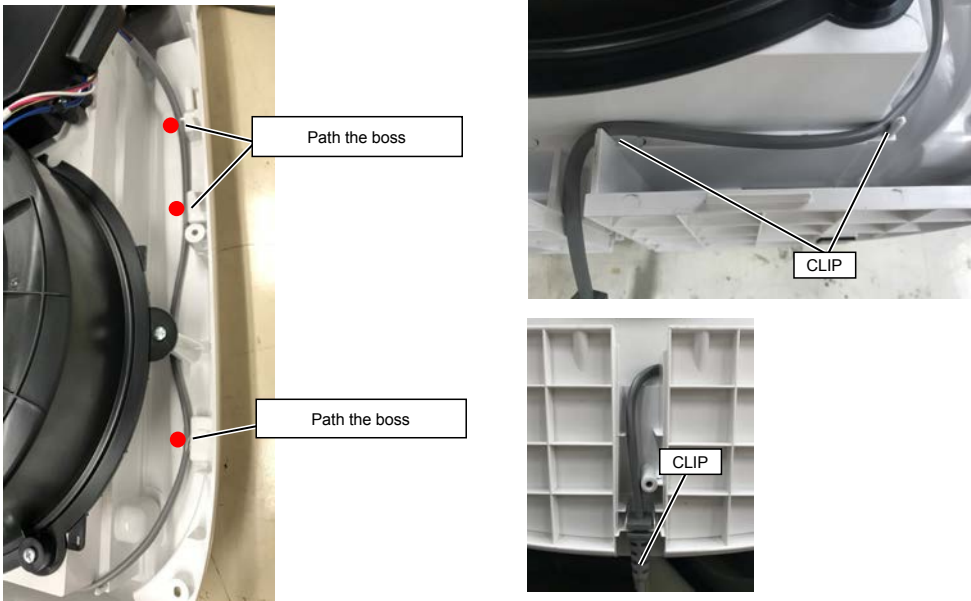
2. POWER HERNESS



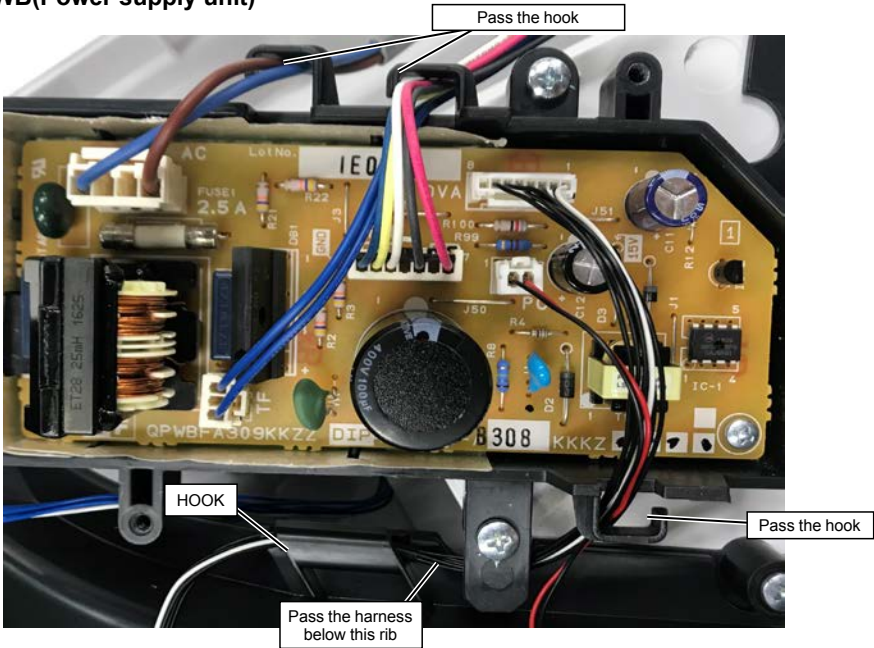
3. MOTOR



4. AC CORD



5. PWB(Power supply unit)



6. DUST SENSOR HARNESS

