

Fume Hood FH(E)Series

(Apply to FH1000(E) FH1200(E) FH1500(E) FH1800(E))

Maintenance Manual

Version 2018.02

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Part 1. Failure and Maintenance



Note: the following maintenance tests should be conducted by professional personnel to avoid accidents caused by improper operation.

Failure 1. The device is not powered

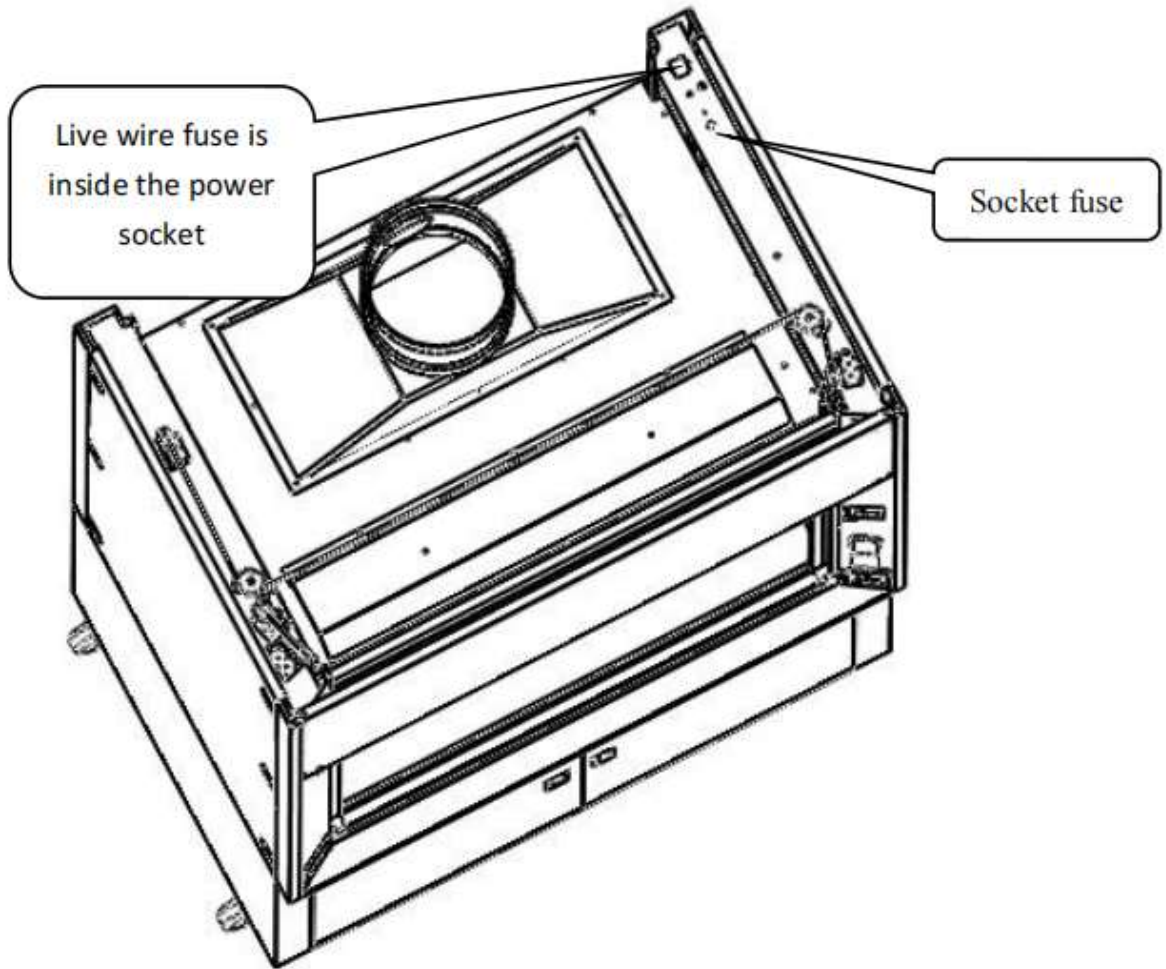
It means there is not any response, when the power switch and control panel switch is turned on (buzzer does not ring, display screen is not bright, button has no response).

Treatment methods and steps are as below,

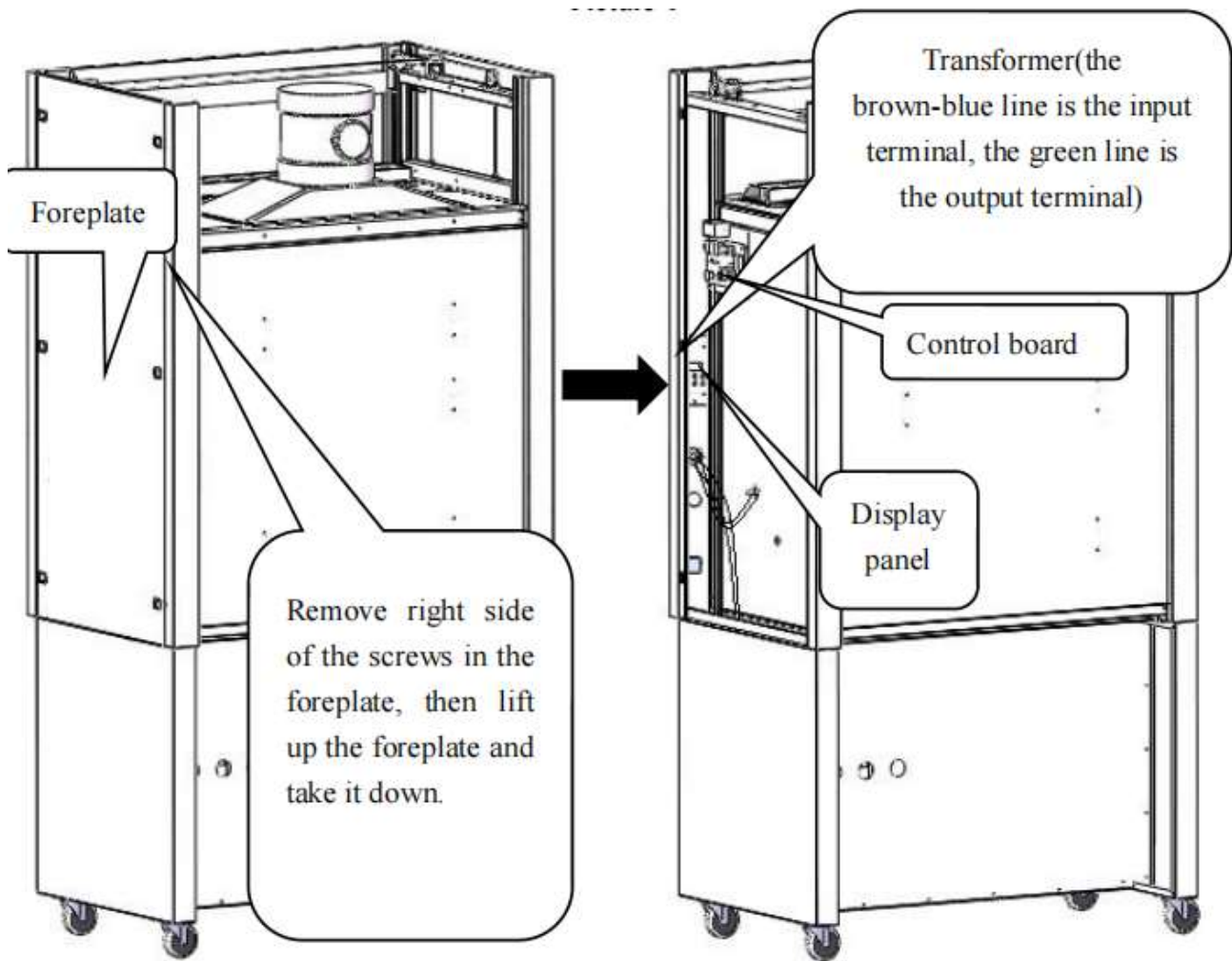
Detection Position	Processing method	Changing method	Diagram
Power Wire	Check whether the power supply is normal and whether it is consistent with the electrical parameters required. Use a multimeter to determine whether the power supply wire is broken or damaged.		
Fuse	After confirmed there is no problem with the above items. Then confirm whether the live wire fuse of the power input port (on the top of the right side of the fume hood) is burnt down. Pls replace the fuse with same specification on the label if burnt down. The fuse is installed in the rear of the right side of the fume hood (Picture 1). The fuse holder and the power outlet corresponding are respectively installed with the socket and live wire fuse. Fuse specifications and side	The round fuse holder on the back specification is F5A $\phi 5 \times 20\text{mm}$ F10A $\phi 5 \times 20\text{mm}$. Turn off the power and unplug the plug, rotate the socket fuse holder counter-clockwise with the Phillips screwdriver. Then replace a new socket fuse. Similarly, replace live wire fuse with the straight screwdriver.	

	pasted of the fuse label do change as the label shows		
transformer	<p>1.Confirm the above items no problems, then detect the transformer, the location of the transformer (Picture 2).</p> <p>2.Press the buckle on the right side of the cabinet, remove the middle panel, and find the transformer for testing.</p> <p>3.Use a multimeter to check the transformer input voltage (the voltage should be the supply voltage of the device) and the output voltage (Picture 3). First use a multimeter to test transformer two input AC voltage on or off, this voltage is the grid voltage. And then test the transformer output voltage: test with the multimeter AC file between the two lines CN6 is between 12V-14V voltage, indicating that this group of voltage output is correct, if the test no voltage, indicating transformer bad, replace the transformer.</p>	<p>1.Mark and take the picture of the transformer wire harness connection, and then remove the old transformer with a wrench.</p> <p>2 Take the new transformer, wiring the transformer in accordance with the previous marking and photo, and install it in the original position with a wrench.</p> <p>3.Power on and running the device, turn off if without error,then re-assemble in the reverse order of disassembly.</p>	As shown in Picture 2, Picture 3, Picture 4
Cable	After the confirmation of the above items, then confirm whether the cable CN7 in Picture4 and CN1 in Picture 5 are connected well. Then confirm whether CN8 in		As shown in Picture 4 and Picture5

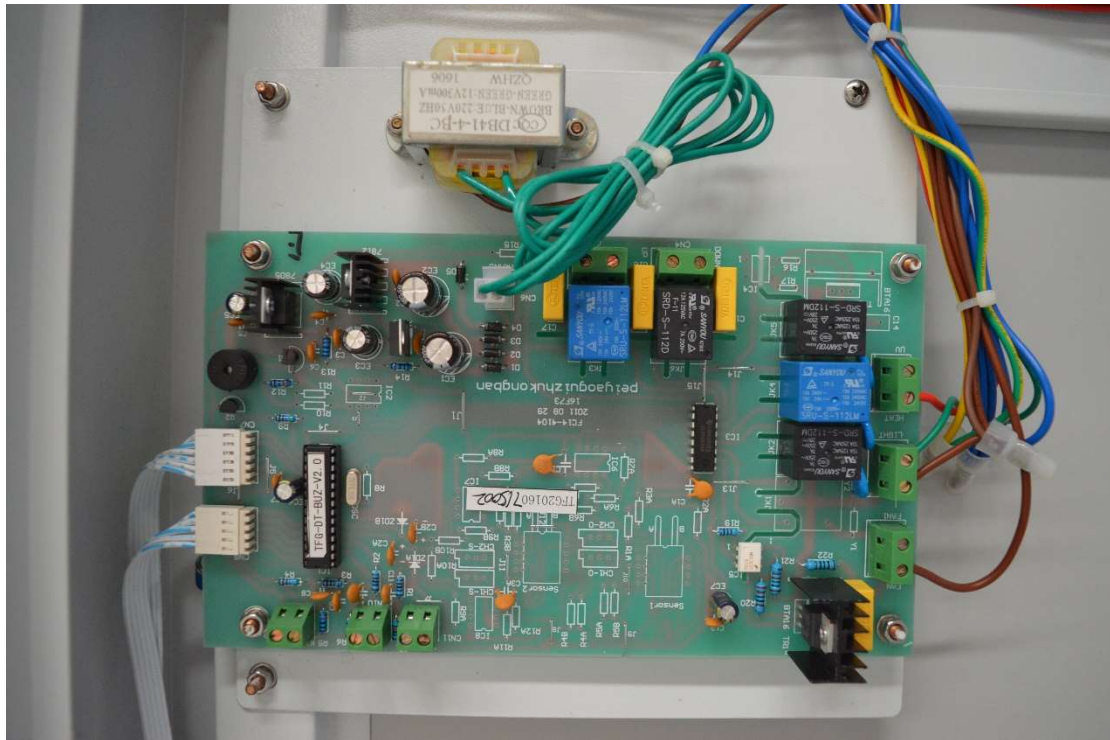
	Picture4 and the CN2 in Picture5 are connected well.		
Control panel	After the confirmation of the above items, please replace the new control panel.	<p>1.Mark and take the picture of the control panel harness connection, then use a wrench to remove the old control panel.</p> <p>2.Take the new control panel and install it in the original location in accordance with the previous mark and photo to connect the control panel.</p> <p>3.Power on and running the device, turn off if without error,then re-assemble in the reverse order of disassembly.</p>	As shown in Picture 3 and Picture 4



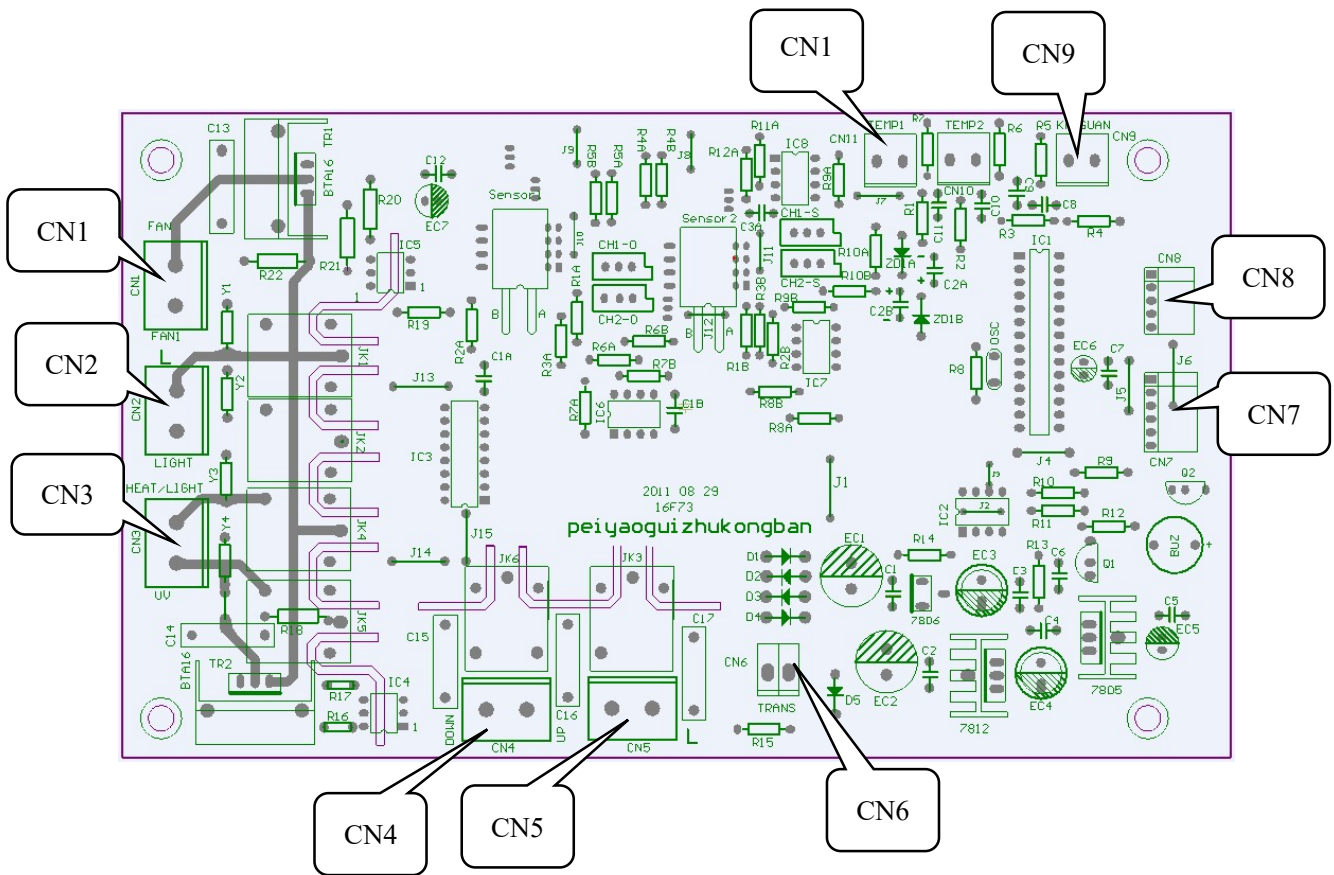
Picture 1



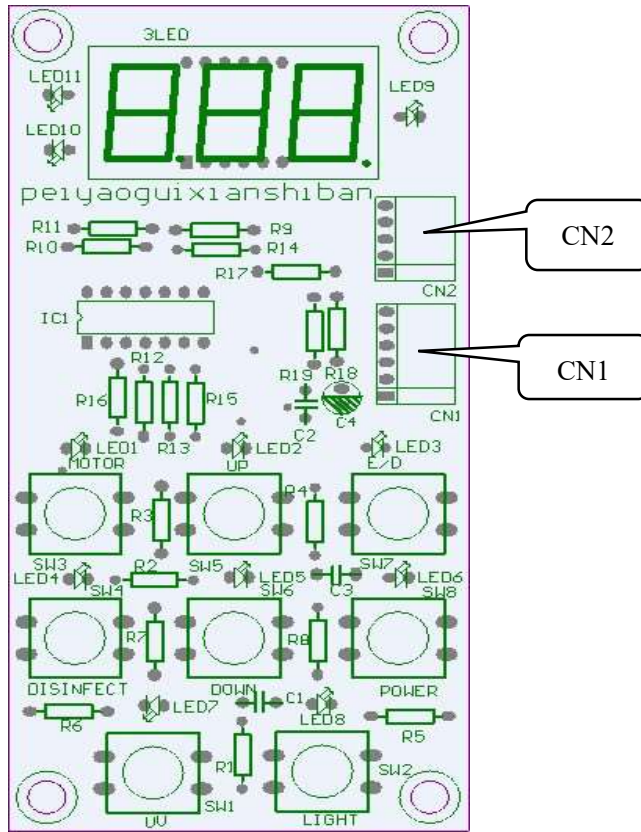
Picture 2



Picture 3



Picture 4 Control panel



Picture 5 Display panel

Failure 2. Digital tube is not bright

Digital tube is not bright (The buzzer sounds normally after power on) It refers to alarm all button function is normal after power on, but the digital tube is not light or no response.

When dealing with such failure, processing method and steps are as follows:

Detection method	Processing method	Changing method	Diagram
Digital tube	To find the display board and control board according to the method of finding transformer in Failure 1. Confirm whether the digital tube is damaged or not, replace the new display board if damaged.	<ol style="list-style-type: none"> 1. Mark and take a picture of display board part of wire connection, and then use a wrench to remove the old display panel. 2. Take a new display board, according to the previous mark and photos to wire the display panel. Then Use a wrench to install it in the original position. 	As shown in Picture 2, Picture 3, Picture 5.

		3. Run the machine, if run without error, re-assemble in the reverse order of disassembly.	
Cable of display panel and control board	Confirm whether the cable of display panel and control board connected well.		As shown in Picture 3
Control board	Please replace the new control board when above items were confirmed correct.	Control board replacement method refers to Failure 1 mentioned.	As shown in Picture 3, Picture 4.

Failure 3. Button no response and digital tube is not bright (boot alarm)

It refers to alarm when power on, button has no response and the digital tube is not bright. The processing methods can be referred to Failure 2 when dealing with such failures.


Failure 4. Socket without electricity



Socket without electricity means turn on the switch when power on, open the control panel power key,

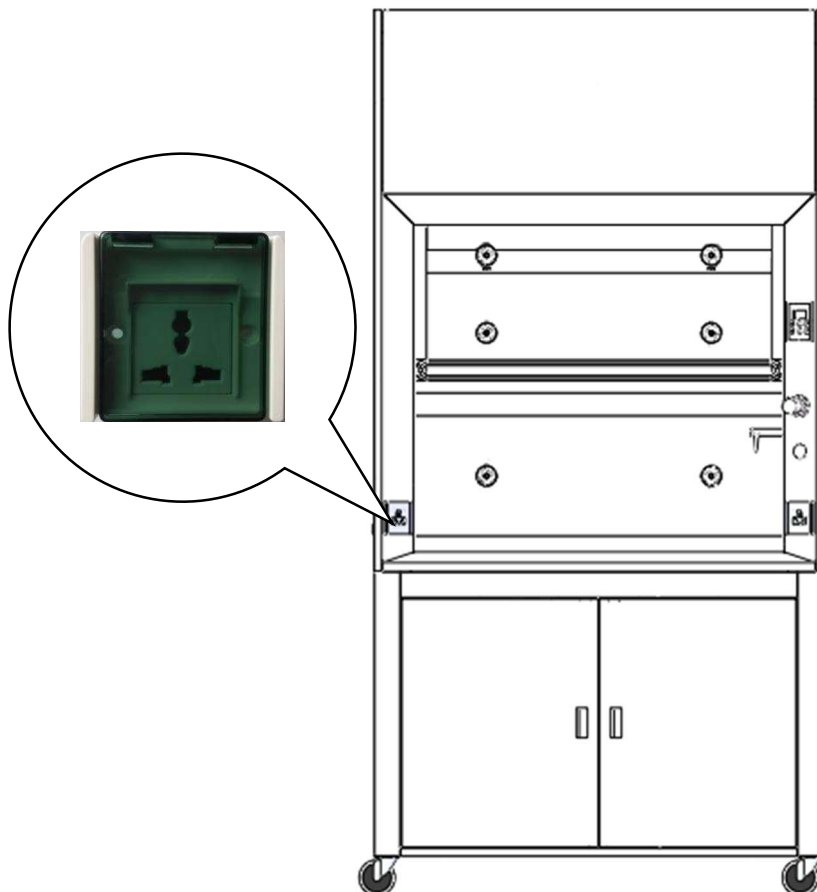
Socket on the cabinet has no electric when start "  " button.

Methods and steps to deal with this failure are as follows:

Detection method	Processing method	Changing method	Diagram
Socket fuse	Check the socket fuse on the rear side of the cabinet (position As shown in Picture 1). If the fuse is blown, replace the fuse with its corresponding label calibration specification.	Replacement method as Failure 1 the replacement method of fuse.	As shown in Picture 1
Socket	After confirming there is no problem with the above item, remove the socket on the front	After confirming there is no problem, Simply remove the 2 screws on each side of the socket	As shown in Picture 6


	<p>side (Picture 6), knob down the socket key, use the multimeter to measure the voltage of wire that connection socket (the value should be the supply voltage) and judge whether the socket is damaged. If the connection live wire voltage is normal, the socket is damaged, then replace the socket.</p>	<p>(Before removing the outlet, make sure that the equipment is powered off. And when taking out, please pay attention to the internal wire connection, and avoid disconnecting the wires. Behind "L" is the Live Wire interface, "N" is the zero line interface, “⊕” is grounding interface.) Take a new outlet, and installing it in the opposite direction in accordance with the demolition method.</p>	
<p>Socket line</p>	<p>After confirming there is no problem with the above ite, Use a multimeter to check whether there is socket line disconnect, If there is a broken line, Reconnect it after power failure. The socket wire is connected to the CN3 (Picture 4) on the control board(Follow the method of finding the transformer in Failure 1 to find the display board and the control board)</p>		<p>As shown in picture 4</p>
<p>The control panel (or display panel)</p>	<p>After confirming there is no problem</p>	<p>The method of replacing the</p>	<p>As shown in Picture 2</p>

	<p>with the above item, powering on the device, press "  " and "  " in turn. Use the multimeter to check whether the CN3 red wire (socket wire) and the blue wire (neutral wire) are energized on the control panel (The value should be the supply voltage). If not powered, the control panel (or display panel) may be damage, please replace the new control board (or display panel).</p>	<p>control board is shown in the control panel replacement method in Failure1. The method of replacing the display panel is shown in the digital panel replacement method in Failure 2.</p>	
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Picture 6

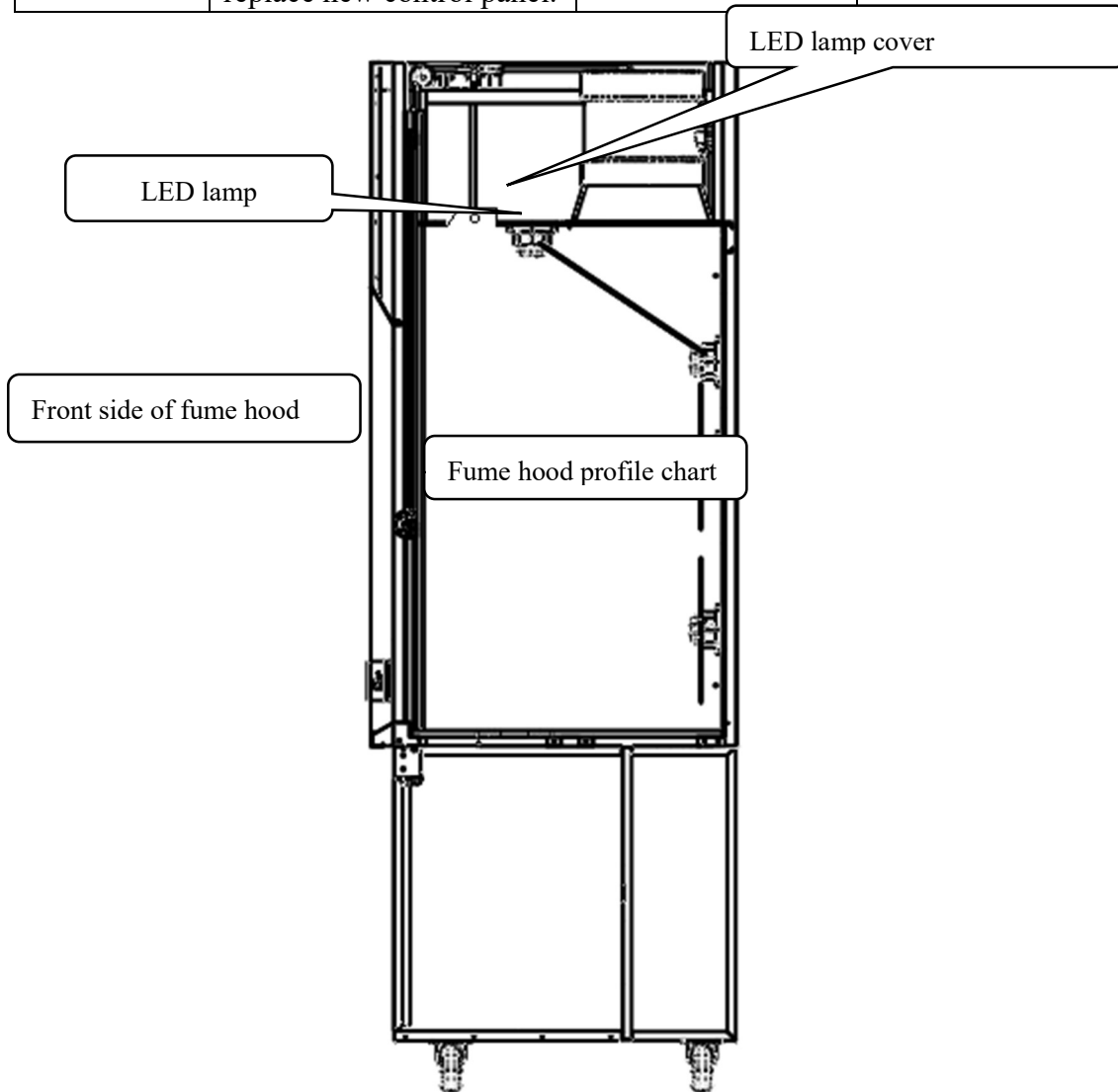
Failure 5. LED lamp is not light

After turning on the power of the fume hood and control panel and pressing the “  ”button, the LED lamp is not bright.

The processing methods and steps for dealing with such failures are as follows:

Detection method	Processing method	Changing method	Diagram
Plug in the right side of LED lamp	Use a Phillips screwdriver to remove the back cover of the LED lamp and remove the LED lamp cover. Then check the plug (in the right side of LED lamp) is off or not. If it is detach, re-connect and reverse the cabinet.		
Lamp tube	Replace the LED lamp (the location of the LED lamp as shown in Picture7)	1. Remove the right side plug, remove the old LED lamp tube.(as shown in right picture).Take a new LED lamp, re-assemble in the reverse order of disassembly.	
Control panel	If all the above-mentioned items works well, then please find the display panel and control panel, press “  ” then “  ”button, using the multimeter to check the voltage of the green wire and blue wire which on the CN2 wire holder of the control panel(picture 4)(the voltage should be	The way of replacing the control panel see the description in Failure 1	As shown in Picture 3、 Picture 4


	the power supply), if the multimeter doesn't show any voltage and the control panel is broken, please replace new control panel.		
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Picture 7



Failure 6. Blower does not work

Turn on the power switch, when the device is powered, open the power key on the control panel, start

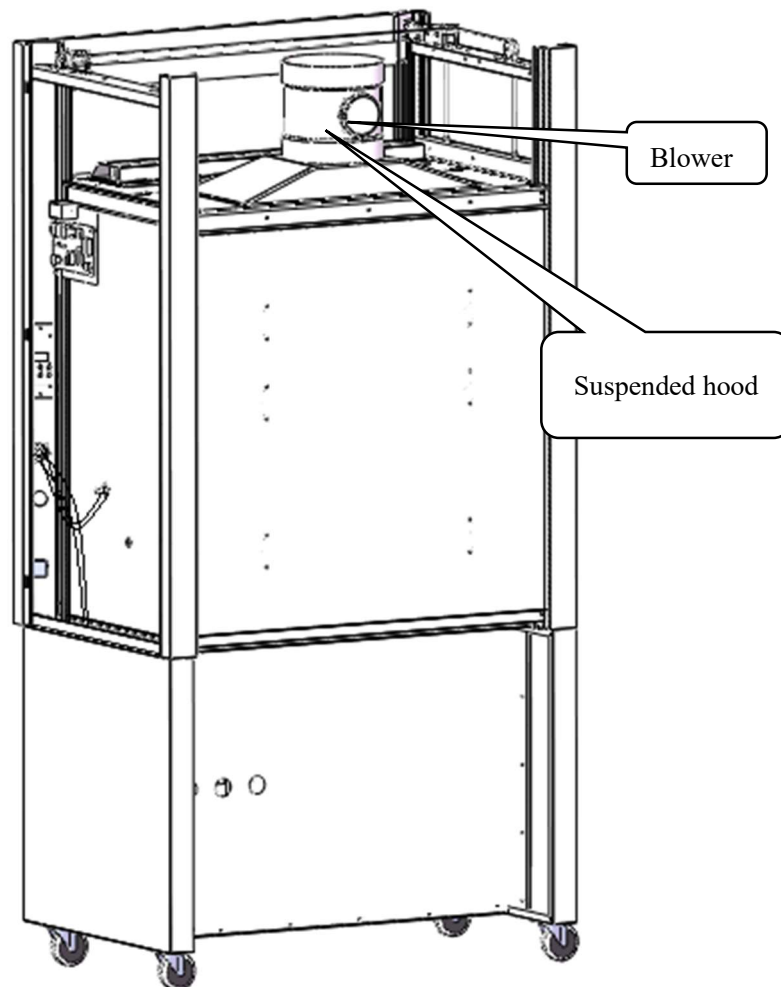
"  " button, the blower does not work.

The processing methods and steps for dealing with such failures are as follows:

Detection method	Processing method	Changing method	Diagram
Blower connection	Check whether there is wiring off, offline or short circuit		

	phenomenon. If there is a similar situation, it should be eliminated in turn.		
Control Panel	<p>Find the display panel and the control panel using the method of finding transformer in failure1. Turn on the power switch, press "  " and "  " button to check whether the blower work. If does not work, press the fan button, while the indicate light is on, use the multimeter test the CN1 terminal block and zero line voltage on control board (Picture 4). The voltage should be more than 60% of the supply voltage. If the voltage is abnormal, replace the control panel. If the fan indicate light is not on, replace the control panel.</p>	Method for replacing the control panel is as shown in Failure 1.	Picture 4
Blower	If the above is no problem, please connect the bower with power supply directly and observe whether the blower work, if do not work, maybe the blower is	As shown in Picture10, removed the screw around the blower, and remove the blower, take a new blower to put it on the mounting plate, connect wire as the photos taken before, then running the	As shown in Picture 9, 10, 11 and 12.

	damaged, please replace the same type blower.	blower, if there is no problem please turn electricity off and installing in the reverse order.	
Blower and circuit board connecting wire	If the above is no problem, please test whether the connection is loose or broken of blower and circuit board connecting wire, if connection is loose or broken, please reconnect wire (as shown in Picture 3) then restore the fume hood.		



Picture 8

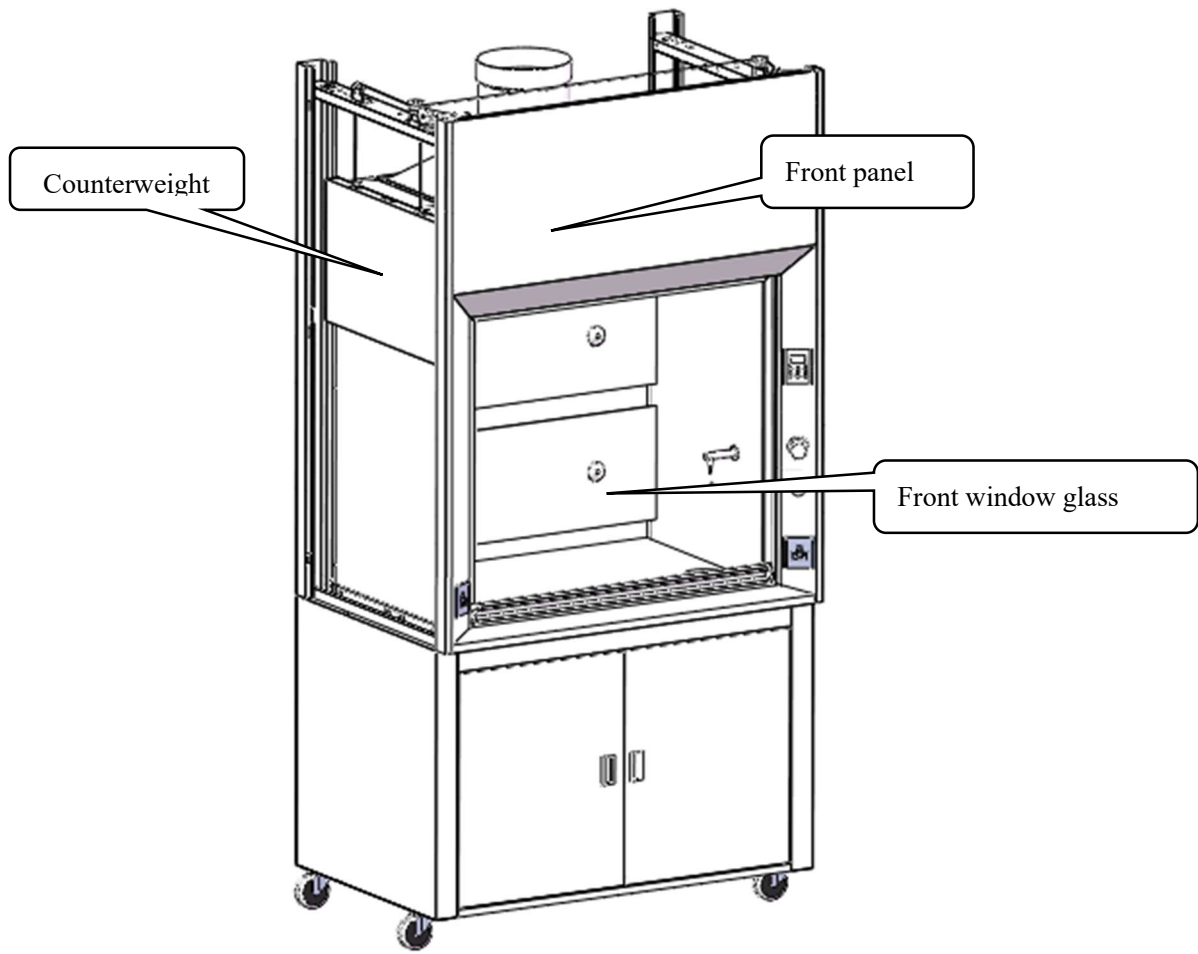
Failure 7. Airflow velocity adjustment failure

When the circulating speed key is pressed, the speed of the blower is not changed. Please replace the new control board directly to deal with such problems. For the method of replacing the control board, refer to the method of replacing the control board in failure 1.

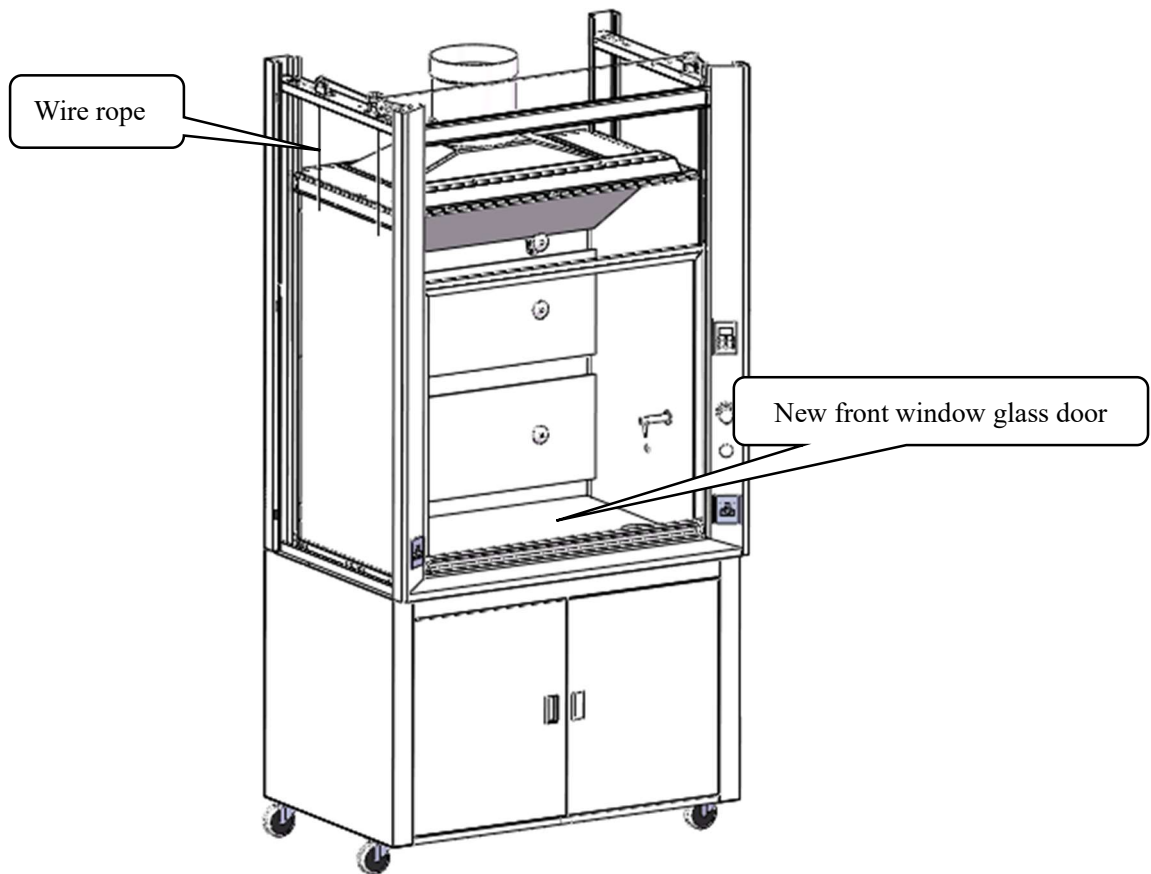
Part 2. The replacement of spare parts

Replacement 1. Replace the front window

Replacement parts	Replacement method
Front window glass	<p>a. Cut off the power supply, remove the cabinet tap, and place the fume hood at right place.</p> <p>b. Press the row of buckles on the right side of the cabinet, remove the right side fore plate, and then remove the left side panel by the same method.</p> <p>c. Put the front glass on the lowest side. Take photos of the glass door section, the counterweight section, and the wire rope section. While carrying the counterweight on the right side of the cabinet, remove the counterweight wire rope and remove the counterweight.</p> <p>d. Remove the front panel with a Phillips screwdriver on both sides of the cabinet, and then remove the glass door wire rope.</p> <p>e. Lift the glass door and remove it from the top of the cabinet.</p> <p>f. Take the new front glass door and place the front glass door into the cabinet from the top of the cabinet (note that place the rope on the pulley through the front glass bottom plate). Then take the front panel and use a Phillips screwdriver to attach the front panel to the cabinet. Lift the counterweight to make the bottom of the counterweight is 750mm from the bottom of the cabinet, and tie the rope to the counterweight, requiring a firm connection. Then restore the cabinet.</p>



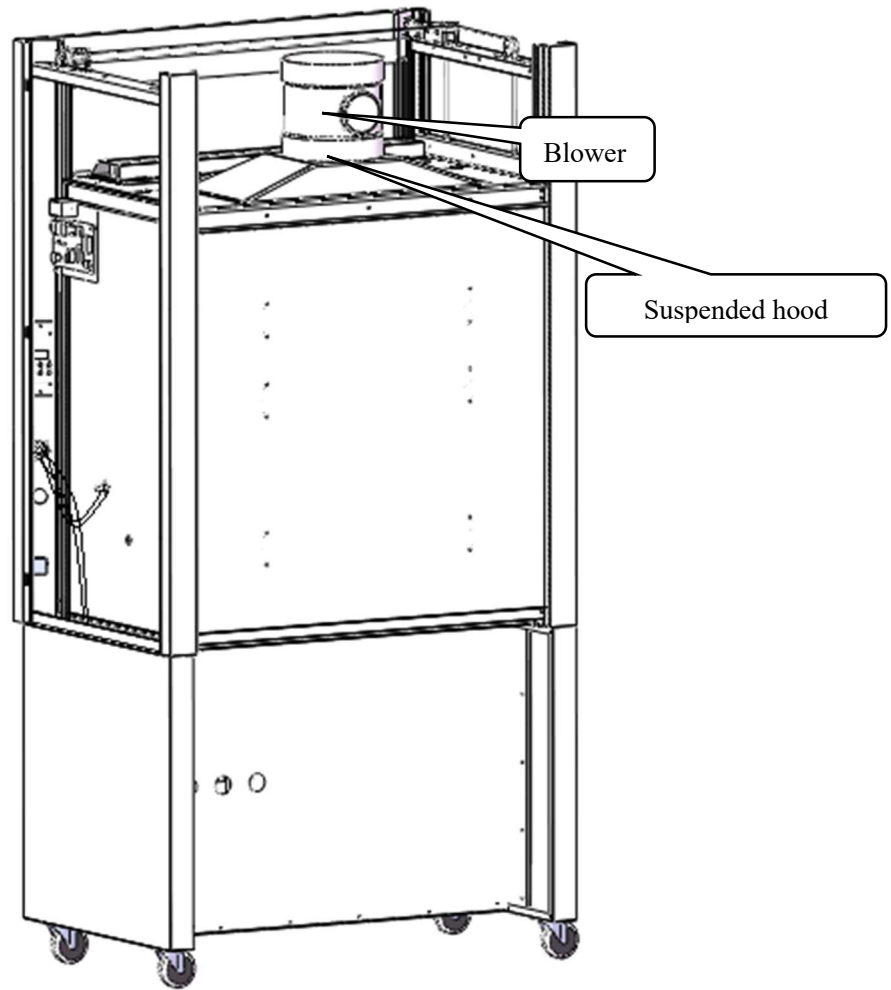
Picture 9



Picture 10

Replacement 2. Blower replacement

Replacement parts	The method of replacement
Blower	<p>a. Cut off the power supply, remove the cabinet tap, and place the fume hood at right place.</p> <p>b. Press the row of buckles on the right side of the cabinet, remove the right side fore plate, and then remove the left side panel by the same method.</p> <p>c. Mark and take a photo of the fan harness section and then disconnect the fan harness.</p> <p>d. Remove the fan fixing screws with a screwdriver.</p> <p>e. Take the new blower, install it on the suction hood, and then install it on the cabinet in the opposite direction of fan removal.</p>



Picture 11

Part 3. Appendix:Wiring diagram

