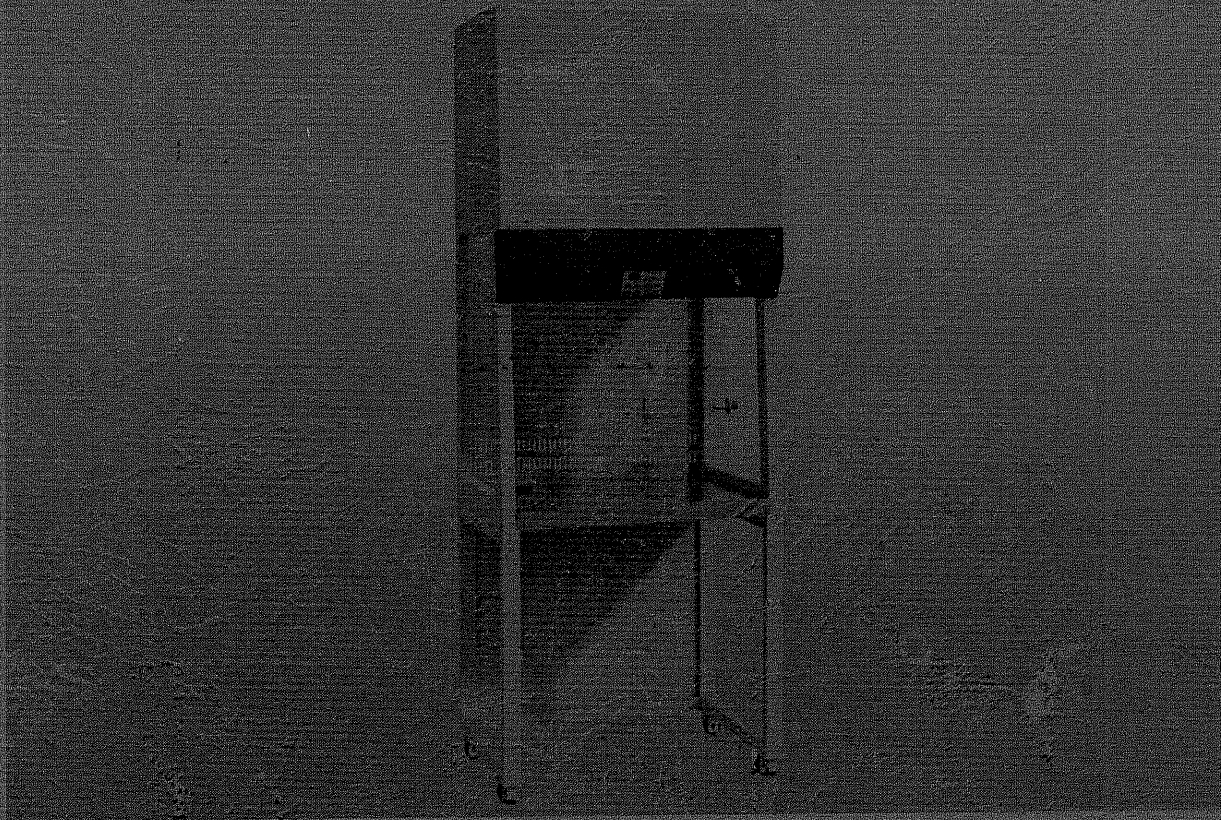


BIOBASE FH-Series Fume Hood

User Manual



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Preface

Welcome to choose BIOBASE FH-Series Fume Hood. And we sincerely hope that our product can bring you best help. In order to make you understand more clearly about our Fume Hood, please read this manual carefully before you start to use it. It is very important for you to use our instrument correctly and safely. And please put the manual in appropriate position in order to use it at random.

Application Range

It is the new technical instrument in air condition workshop and clean workshop. And it is widely applicable in electron, chemicals, mechanism, medicine, university and lab. Fume hood can be used in operation of potential risk or unknown infected factors, and the experiment of flammability, explosive volatilization and narcotics. It can protect operator and samples.

Working environment:

1. Only used in door;
2. Environment temperature: $15^{\circ}\text{C} \sim 35^{\circ}\text{C}$;
3. Relative humidity: $\leq 75\%$;
4. Pressure Range: $70\text{kPa} \sim 106\text{kPa}$;
5. Power supply: AC $110 \pm 22\text{V}$, 60Hz;
6. Power: 800W (include the water-proof socket within the work area).

Product Features

Features of FH-10 Fume Hood

Shell: 1.2mm thickness of Cold rolling stainless steel is used, electro-static coating.

Working zone: It adopts high grade melamine board with good acid and alkali resistance function.

Work table: It made up of Wilsonart Chemical-Resistant laminate with good fire, acid and alkali resistance function.

Window: More than 5mm thickness of toughened glass

Control panel: It adopt touched-model switch, this type could make more convenient operation and pretty appearance.

Electrical control system: it has the function of preventing over-load and getting an electric shock. It has stable performance to extend life time.

Sockets: adopted specialized safety product of laboratory, it has the performance of dirt proof, water proof and acid-alkali proof.

The material is PC Flame-retardant fire.

Digital pressure differential display and electron alarm systems.

Performance Index

- ◆ Velocity: Inflow Velocity: 0.50 ± 0.025 m/s
- ◆ Vibration: The net displacement is no more than $5\mu\text{m}$ (rms) when the frequency is from 10Hz to 10kHz
- ◆ Noise: The noise is less than 60dB (A) when environment noise is less than 50dB and it is 300mm far away from glass door, above 380mm from working board.
- ◆ Light: 30 W
- ◆ UV: 20v
- ◆ Resisting pressure: 1500V can not breakdown in one minute;
- ◆ Grounding resistance: $\leq 0.1\Omega$;
- ◆ Power supply: AC $110 \pm 20\text{V}$, 60HZ;
- ◆ Total exhaust air: $845\text{m}^3 / \text{h}$;

Model	External Size (L*W*H) mm	Working Zone Size (L*W*H) mm	Power (W)	Filter
FH-1000	1000*800*2200	800*750*745	≤ 800	Carbon Active

Function and Structure

I Air exhaust System (refer to the airflow mode chart)

Air system is the main part to ensure the performance of the fume hood. It is made up of blower, filter and air duct. As the negative pressure, the room air is absorbed into the work area, then exhaust from the top, finally through the special duct to the outside room.

II Structure and Components

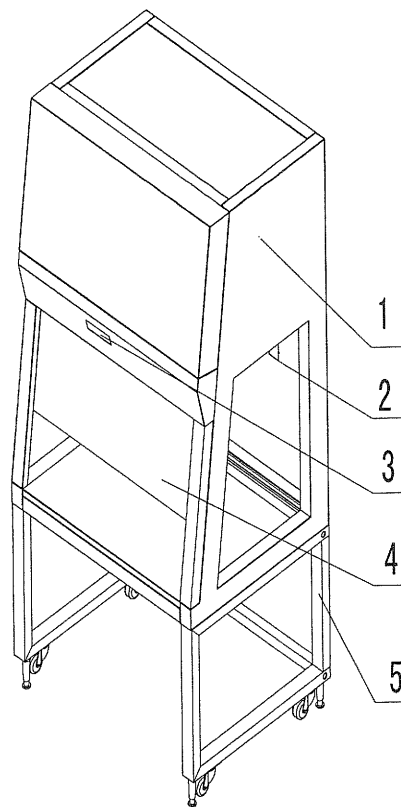


Figure 1: Structure

1. Body 2. Socket 3. LED Display 4. Glass Window 5. Base Stand

◆ Front Glass Door

Front glass door is made up of toughened glass, which hold double-sided sheet, and it could prevent explosion. It cannot be cause negative effect when explosion. The sheet within the glass could separate ultraviolet ray effectually. In addition, It could also effectively decrease the injury for the operator when sterilization. The glass door adopts manual drive to adjust its height.

◆ UV Lamp

The UV light is used to sterilize, it located at the back inner side of the working area. This position could ensure the ultraviolet ray could reach all space of the working area.

◆ Fluorescent Lamp

The fluorescent lamp could ensure the working area have enough light. It made up of a 40W fluorescent tube. It's under the control panel, easy to change.

◆ Control Panel

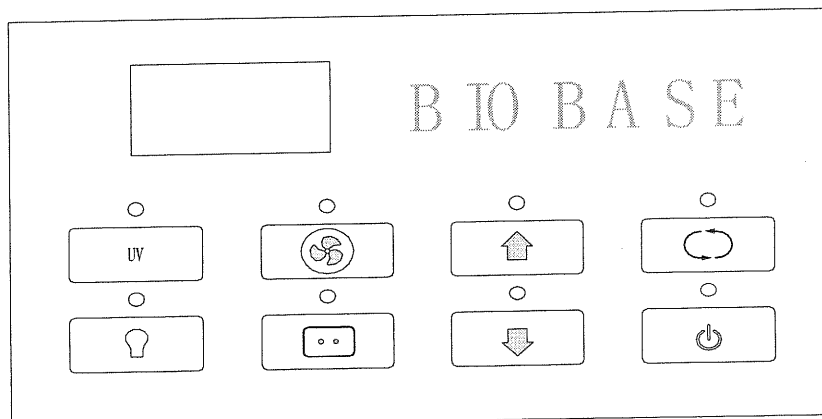




Figure 2 Control Panel


There are 8 soft key on the control panel, the key as follows:


“UV” “ ”, “ ”, “ ”, “ ”, “ ”, “ ”, “ ”

(refer to Figure 2)

“ ”: Air speed adjusting key. There are six air speed, the adjust method: one time you press this key, the air speed will add one class, After reach class 6, it will recurrent.


“ ”: Controlling the front glass window.. When you press this key, the window will up.


“ ”: Controlling the front glass window. When you press this key, the window will down.

“ ”: Power key. Each time you press this key, the state will change between ON and OFF. Other keys not work when the state is OFF


“UV”: Control UV lamp. Each time you press, the state of the UV lamp and the indicator light on the control panel will change, from ON to OFF, or from OFF to ON.

Note: the UV lamp, door, fluorescent lamp and blower have interlock function, when the operator want to open the UV lamp, it should close the front glass door completely, fluorescent lamp and blower.

“ ”: Control fluorescent lamp. Each time you press this button, the state of the fluorescent lamp and the indicator light on control panel will change between the ON and OFF.

“ ”: Blower key, when you press this key, the blower will start to

work.

“  ” Control the socket of the work area. When you press it, the socket will has power. Press the second time to cut off the power.

◆Water-Proof Socket

We set a water-proof socket on the right side of the working area It could supply power for the device within the working area. The operator could control it through the “SOCKET” key on the control panel.



The power of the device using in the working area should less than 500W. The water-proof socket could prevent water only the front cover lay down.

◆Fuse Tube

One piece of F10A, $\phi 5 \times 20$ mm, it's for the main power.

One piece of F5A, $\phi 5 \times 20$ mm, it's for the water-proof socket.

Notes

1. Fume Hood is one of the important lab safety devices. In order to correct usage to ensure safety, please read this instructions and notes carefully. If necessary, please join lab safety and operation skills training
2. Read this manual before you use the fume hood
3. Please retain this instruction to vide
4. All the damage caused by the misuse or change the constructions unauthorized, Biobase will not take any responsibility.
5. The fume hood should avoid laying nearby the personnel frequency gate/window or the corridor
6. **The power should have good earth wire.**
7. Before changing the UV lamp and fluorescent lamp, the power should be put off.
8. Effort should be Bilateral symmetry when you put up of closed the front door.
9. Please do not work or look straightly when the VU lamp turn on.
10. After packing, the package should be store at the following circumstances: the temperature should be less than 40°C; The relative humidity should below 85%; no aggressive gas exists and it has good ventilation.
11. the glass door should up and down very lightly to avoid the trouble

caused by strong force

12. The front window of the fume hood is made by the principle of gravity balance. It should be up and down gently to avoid causing any damage as overexertion.

13. The assembly should be cleaned regularly according to the usage, such as flow guiding plate etc.

14. The flow tunnel and flower etc. should be clean, maintain by certain person

15. Not any device should be placed within 150mm away from the front window, and it's better to adjust the front window to the low height, as the fume hood needs enough space to ensure the airflow.

16. In the course of usage, please try not to put the soft things (such as the paper towel) on the table top, to avoid it been absorbed in the wind hole or blower.

Declaration: Any danger caused by abuse, Biobase will not take any responsibility.

Installation and Operation Instruction

I Installation

1. Install position

The fume hood is better not to be place at the following place:

Where people work frequently;

Where may block the window or light;

Where may obstruct the door opening.

2. Preparation before installation

- 1) Check the surface of package and damage situation
- 2) If the equipment was delivered in cold weather, put in a warm place for 24 hours before use.
- 3) Before breaking the package, move the entire equipment to the place where as close as possible.

3. Installation

- 1) Clear the package material inside the case. **Any packing fragments may lead to the damage of filter and air blower.**
- 2) Confirm the complement of accessories according to the list.
- 3) Check the condition of fume hood, find if there is any damage on the surface and the component inside the working zone is tight. If necessary, check the HEPA filter and screws of front screen.

Do not put hand in the exhaust fan in any case

4. Checking and Debugging

Run fume hood and test its function for trail, to make sure all functions are normal.

5 Training

After the installation, train the operators basic use steps and cautions.

Untrained or unqualified persons should not use this equipment.

II Usage



1. Prepare before work

Put the plug in socket, put the other end to net socket, the required power supply is 110v 60 Hz.

2 Function switch/buttons

See P8 introduction

5. Operation

When power is ready, press the “” key, after the blower runs 5 minutes, the operator could use the fume hood. When running, the LED screen will show air speed class. It could be control by “” key. If the experiment needs assistant tools, it should be put it into the work area before start to the experiment. Don't open window frequently during usage. When the experiment finish, close the front glass door completely and open the UV lamp 30 minutes for sterilization.

1. During sterilization, the glass window should be closed completely to protect air and skin, do not stare UV lamp

2 Check the strength of UV lamp periodically according to the factory standard, the period is recommended every 3 months, unqualified lamp should be replaced.

Maintenance

I. Maintaining period

Each year or every 1000 working hours and before each restart, proper maintaining should be applied.

1. Cut the power off before daily maintain,
2. The working hours counting directly effect the maintaining decision, we recommend make a particular schedule and record as reference.
3. Exhaust pipe and outside pipe must be maintained often.

II. Recommended maintaining and repairing method

1. Surface Clean

To keep the cabinet clean, clean the cabinet periodically (suggest at least every week), wipe the surface by soft rag dipped soap water. Do not spread any chemical liquid on the screen, in order to avoid color fade or dim letters. Window and cabinet surface should be cleaned by special chemicals.

2. Fuse plug replacement

There are 2 around tube fuse plug base at the right plate of the cabinet, the models are marked in labels that are F5A $\phi 5 \times 20$ mm for power socket, and F10A $\phi 5 \times 20$ mm for zero line, the socket has a F10A $\phi 5 \times 20$ mm fuse plug, too. When the plug need to be changed, pluck off power cable plug, press and twist fuse base anticlockwise by straight screwdriver, change

the fuse, twist fuse base clockwise. To change the fuse in socket, pry out the fuse base by straight screwdriver to change the fuse, and then push it back.

3 UV lamp change

The UV lamp equipped on cabinet is designed to work 1000 hours, we suggest to test the UV light strength periodically, it can be done by special test card. To change the UV lamp, power off the light, twist light tube to take out from base, put a new one on.

4. Light change

When the light need to be changed, power off the cabinet, open the front plate, remove the screws at both sides of the cabinet, open the front cover plate, twist off the light tube, replace by a new one, fix the font plate.

Repairing

I. Before Maintenance

1. To check whether the equipment implement grounding measure to ensure use security following instructions. Inspect electrical wiring devices to see if there is falling, short break, and if those occur a s, should be canceled at once.

2. Judgment and maintenance for regular fault

1) The screen is not bright

Check whether the power is on and the conditions for the importation, whether or not the insurance control tube is broken.

2) UV LAMP is not bright. Replace UV lamp

3) Fluorescent lamp is not bright. Replace fluorescent lamp



1. The above-mentioned electrical components must be operated by qualified electrician in the security conditions (cut off power supply).

Other parts are not allowed to disassemble, or consequences responsible by users themselves

2. When the equipment breakdown caused by other fault, and the operators can not handle immediately, please notify our company's maintenance department immediately, in order to your safety, do not maintain equipment on your own

3. Maintenance of the equipment is only recognized by the BIOBASE training of technical personnel.

4. If you need to order parts, please contact our technology services sector, please specifying the Fume Hood type and number.

5. The used filters should be handled by medical institution using isolation devise in accordance with the medical waste handling regulations.

Maintenance Guarantee

- The guarantee period is one year which begins from the day you buy it
- Our company assumes no obligation to warranty the equipment failure or damage due to the improper use within the warranty period.
- Our company responsible for maintenance after warranty period, the maintenance fee charged
- Provide the necessary drawings and technical data to the person or institution which is trained and recognized by our company.

Spare part list

250V, 10A Fuse tube one(replacement is allowed by user following

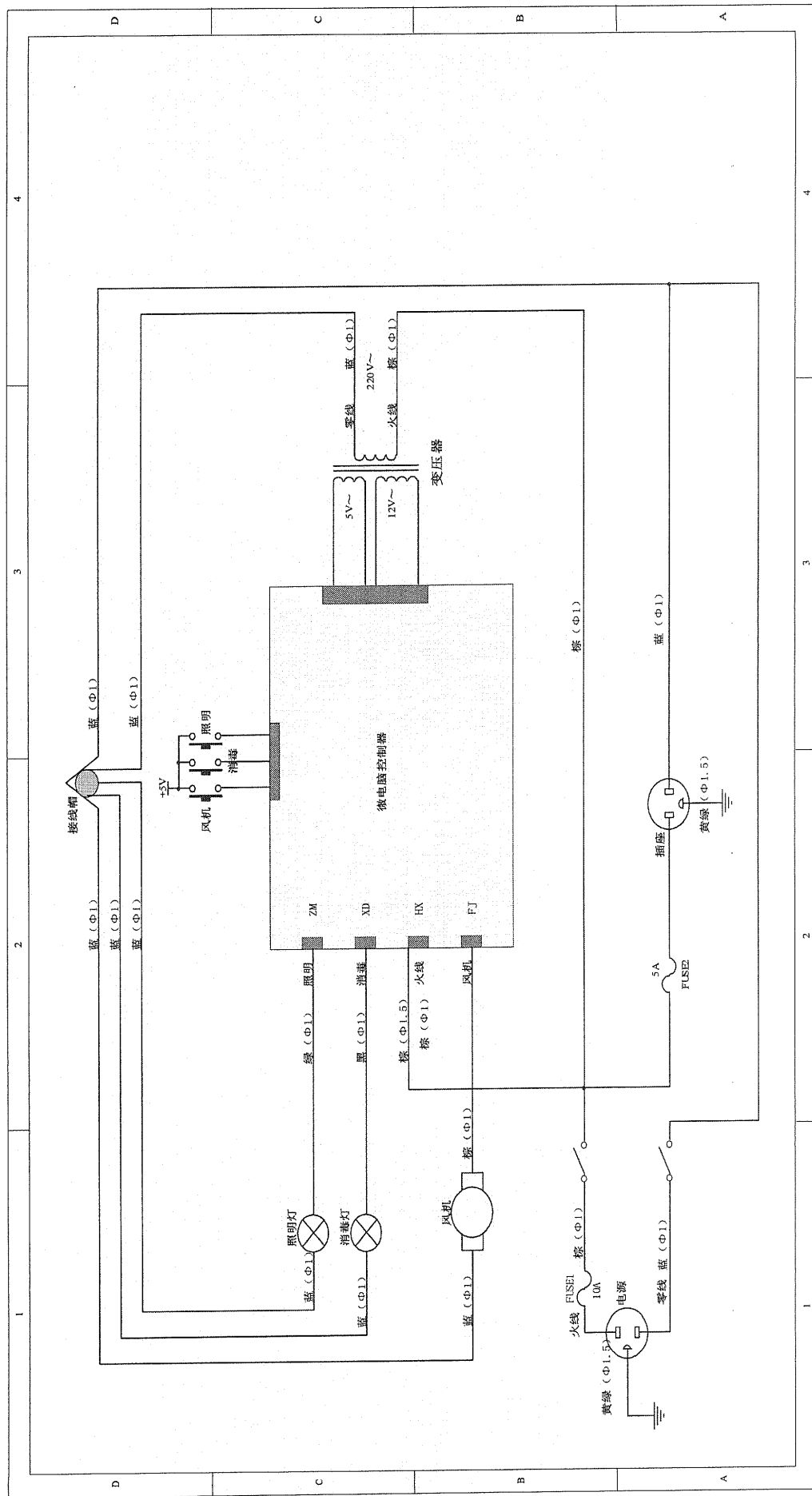
instructions)

250V, 5A Fuse tube one

Power line one piece

UV lamp tube one piece

Wiring Diagram



Label illustration

Fuse tube label:

10A fuse tube indicating label, under the other fuse tube

10A fuse tube indicating label, under the power socket