

BIOBASE®

**Constant-Temperature Incubator
BJPX-H30
User Manual**

BIOBASE GROUP

Version 2020.08

Preface

Thank you for purchasing BJPX-H30 Constant-Temperature Incubator .

Intended use

The instrument is used for scientific research in the fields of medical and health, pharmaceutical industry, biochemistry, industrial production and agricultural science for bacterial culture, breeding, fermentation and other constant temperature tests. Do not use for other purposes.

Using object

This manual is intended for the laboratory technologists operating this instrument. Before using the product, please carefully read this manual. Keep this manual in a safe place for easy reference. If you do not follow the precautions described in this manual, we will not guarantee the maintenance.

Statement

Jinan Biobase Biotech Co., Ltd(hereinafter referred to as "Biobase") has the final interpretation of this manual.

The Company shall be responsible for the safety, reliability and performance of the product only if all of the following requirements happened:

- 1.Assembly operations, expansion, re-adjustment, improvement and repair by the Company recognized professionals.
- 2.All repairs involving replacement parts and supporting the use of accessories, supplies are original of the Company (original) or approved by the Company.
- 3.The related electrical equipment is according to national standards and the use of the manual requirements.
- 4.Product operation is carried out according to the instruction manual.

Disclaimer

Biobase shall not be liable for any equipment failure or damage, or for any direct or indirect damage that may occur during the use of the equipment.

- 1.Malfunction or damage due to violation of the instructions, precautions, and intended use of this manual.
- 2.Malfunction or damage caused by repair or alteration of the other company.
- 3.Malfunction or damage caused by use instruments of other company at the same time .
- 4.Malfunction or damage caused by operating environment not corresponding to the specified operating environment (power conditions, installation environment, etc).
- 5.Malfunction or damage caused by natural disasters such as earthquakes and floods.
- 6.Malfunction or damage caused by the company unaware of the movement or transfer (transport) after installation.

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Chapter 1 Instrument introduction

1.1 Scope of Application

Laboratory for scientific research units, professional institutions, industrial and mining enterprises and other units, laboratories do the necessary equipment for the storage of bacteria, biological cultivation research.

1.2 Main Technical Parameters

Model	BJPX-H30
Parameter	
Studio size L * W * H	320*300*315
Shelf number	2Block
Temperature range	RT+5~65℃
Temperature fluctuations	±0.5℃
Supply voltage	220V、50Hz
Input power	200W

1.3 Structure Characteristics

- Box with high-quality cold-rolled steel, the surface electrostatic powder coating, the coating is hard and solid, with strong antirust ability.
- Studio for high-quality stainless steel mirror, the rounded shape, smooth, smooth, easy to clean.
- Between the cabinet and studio, filled ultrafine glass wool insulation material, has good insulation, and effectively guarantee the stable and accurate temperature inside and the use of the environment.
- Built-in glass door, that is clearly observed inside the heating items, but also good heat insulation effect.
- The box design has a reasonable hot air circulation channels, the inside temperature distribution more uniform temperature rise faster;
- The temperature controller uses the fuzzy PID control, optional RS485 communications(including operating software), micro-printer function, particularly suitable for laboratory and analytical instruments, its full-featured, easy to operate (For details, controller details).

Chapter 2 Installation and Commissioning

- (1) transportation, be careful not to force on the glass, nor collisions box.
- (2) After the landing of this equipment should be placed on stable, such as uneven ground should be amended.
- (3) Do not use in direct sunlight or high temperature and humidity instruments.
- (4) This equipment should be kept away from sources of electromagnetic interference, and the grounding line of the equipment should be effectively grounded.
- (5) The normal operation of the equipment, the box contained objects should be placed not affect the air circulation to ensure uniform temperature inside the box.
- (6) Power supply : AC220V 50Hz. Must use more than 16A three-pin socket, and are liable grounding wire.
- (7) Power do not close behind, do not let the instruments or other items on the power cord, so as not to damage the power cord.

Chapter 3 Instructions for Use

3.1 Instructions for Use

- (1) Open the door, pending the objects into the box on the shelf, close the door.
- (2) Powered on the panel right of the Power switch to "1" position, then the instrument digital display indicates that the device into the working state.
- (3) By manipulating the temperature controller on the control panel, the inside temperature setting you need.
- (4) Instrument to work, the inside temperature gradually reaches the set value, after the required incubation time, the work is completed.
- (5) Turn the power off until the inside temperature close to ambient temperature, open the door, remove the object.

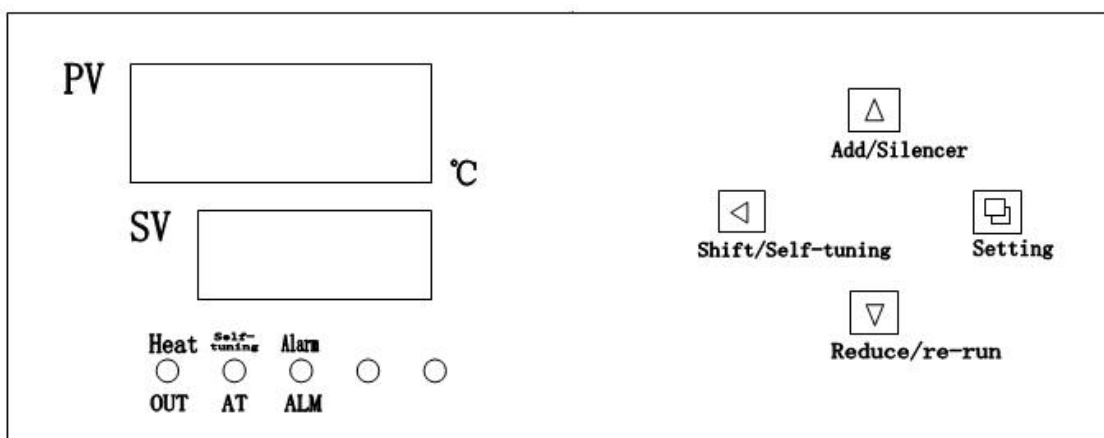
【!】 Please note: Pay attention to the temperature inside the box, open the door to take the matter so as not to burn!

◆ **Special Note**

A product factory have all been rigorously tested, generally not to be corrected, such as the use of environmental degradation slightly, environmental temperature super appropriate range, the temperature will display the value inside the actual temperature errors. As outside the scope of technical indicators, you can refer to the temperature controller operating instructions for correction. Instrument in normal working condition, such as opening the door for too long, temporarily closed the door inside the temperature some fluctuations, which is normal.

Test Note: inside the test temperature, using 0.1 precision mercury thermometers and mercury-side on the inside the geometric center.

3.2 Temperature Controller Operation



●Indicators are defined:

- 1、 "OUT" indicator: The heating output of this lamp is lit, on the contrary extinguished.
- 2、 "AT" indicator: Since the whole timing of this light is flashing.
- 3、 "ALM" indicator: This lights when the over temperature alarm light, and vice versa extinguished.

●Operation and use:

(1) A power controller, the upper row in the display window display "InP", bottom row shows the scale value of about 3 seconds into the normal display state.

(2) temperature and holding time to see and set

Click "Settings" button, enter the temperature setting state, the upper row in the display window display prompt "SP", the bottom row shows the temperature set value (first digit value is blinking), by shift, increase, reduce key modified to the desired settings; then click the "set" key to enter the setting status of the holding time, the upper row in the display window to display the prompt "St.", bottom row shows the holding time settings, by shift, increase, reducing the key changes to the desired settings; then click the "settings" button, to exit the set status here, the settings are automatically saved.

When the holding time is set to "0", timer function, continuous operation of the controller, the next row in the display window to display the temperature set point; The bottom row shows the running time when the set time to "0", the display window, and seconds symbolic light, measuring the temperature reaches the set temperature, the timer start timing, the second symbol flashes, the time to run the end of the next row in the display window shows "End". The buzzer sounds for 30 seconds. After the end of the run, press and reduce / Run button for 3 seconds to restart the run.

(3) Over-temperature alarm, the buzzer continuous tweet "ALM" warning lamp lights up, disconnect the heating output.

(4) when the buzzer sounds, press "Add" button silencer.

(5) "Shift / in the non-established state long self-tuning key": Press to six seconds to enter or exit the system self-tuning; click this button allows to set the value of the shift in setting state flashing to modify.

(6) "Reduce / re-run" key: in the non-set state after the end of the run, long press this key for 3 seconds to restart the run; Click this button allows to set the value to decrement the set state, long press key to enable the settings continuous decreasing.

(7) "Zenga / silencer" button: Click this button allows settings set state sliding scale, long press can make settings for a sliding scale.

(8) In the set state within one minute without any key is pressed, the controller will automatically return to normal display status.

(9) If the controller display bed row display "----", said temperature sensor or controller failure, please check the temperature sensor and its wiring.

● System self-tuning:

When temperature control is not satisfied with the system begins self-tuning. Have greater self-tuning process, temperature overshoot, the user during the system self-tuning before, please give full consideration to this factor.

Long press "shift in the non-set state / self-tuning button for 6 seconds into the system self-tuning procedure," AT "indicator flashing, self-tuning after the end of the light stops blinking, the controller will be more good system of PID parameters, the parameter value is automatically saved. System self-tuning process, press and hold "shift / self-tuning procedure may be suspended from 6 seconds after tuning key.

If over-temperature alarm system self-tuning process, "ALM" alarm light is not lit, the buzzer does not tweet, but heating the alarm relays will automatically disconnect. In the self-tuning process "set" key is invalid. Self-tuning process, whether holding time is set, the controller displays the window

row always displays temperature settings.

● See of the temperature of the internal parameters and settings:

Long press "Settings" button about 3 seconds, the controller on the display row to display the Password Prompt "Lc" The bottom row shows the password value, by adding, subtracting, and the shift key, modify the password value. Then click the "Settings" button, the password value is not correct, the controller automatically returns to the normal display state, if the password is correct, then into the temperature of the internal parameter setting state, then click the "Settings" button you can modify each parameter in turn. Long and then press the "Settings" button 3 seconds, you can exit this state, the parameter values are automatically saved.

3.3 Internal parameter table

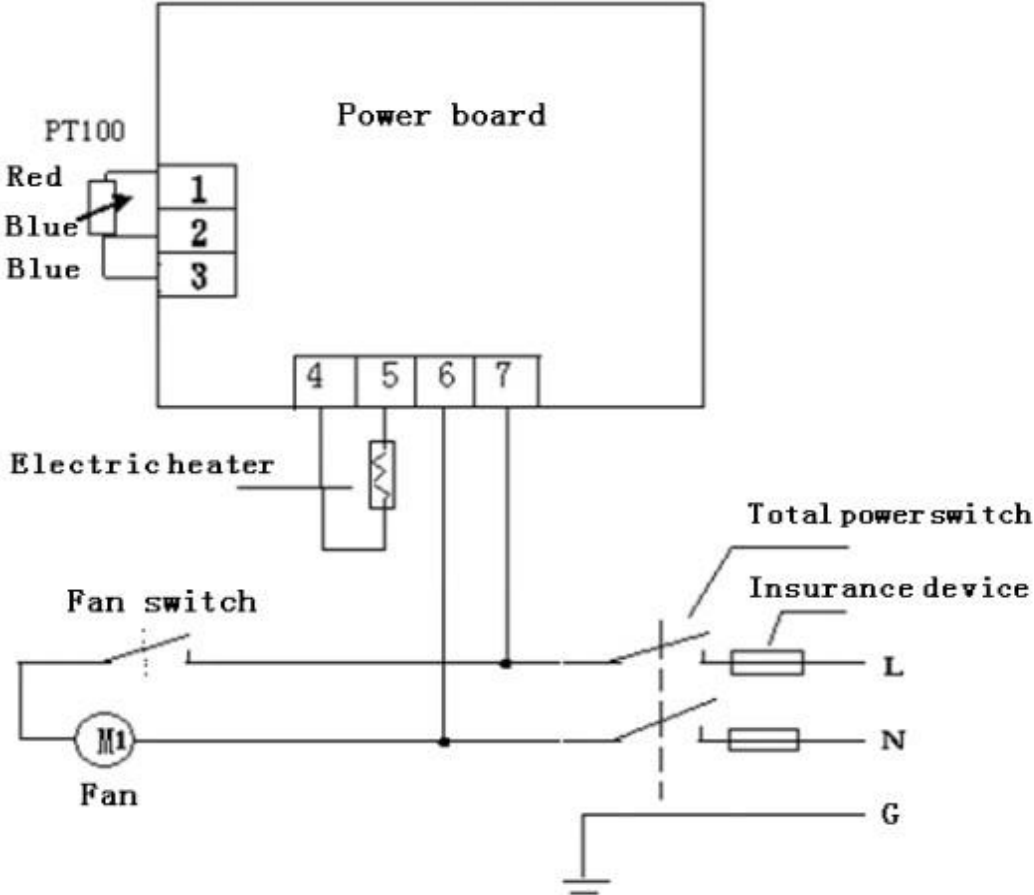
Parameter indicates	Parameter name	Parameter Function Description	(Range) factory value
Lc-	Password	Of Lc = 3 "when you can view and modify the parameter values You can view and modify the parameter values of Lc = 9 "	0
AL-	Ultra-temperature deviation alarm	When the temperature measurement value > temperature settings + AL "Times bright lights, buzzer, disconnect the heating output.	(0.0~100.0℃) 5. 0
T-	Control cycle	Heating control cycle	(1~60 S) 5
P-	Proportional band	Time proportional adjustment	(1.0~ Scale value) 35.0
I-	Integration time	Integral role in regulating	(1~1000 S) 200
d-	Differential time	Differential role in regulating	(0~1000 秒) 200
Pb-	Zeroing	Correction of sensor (low temperature) measurement error of the time difference of Health. Pb = the actual temperature values - instrument temperature	(-12.0~12.0℃) 0.0
PK-	Span adjustment	Correction of sensor (high temperature) measurement error. PK = 1000 * (the actual temperature values - the instrument measured value) / meter measured value	(-999~999) 0
Co-	Off the heating output deviation	When the temperature measurement value ≥ temperature settings + Co. ", turn off the heating output	(0.0~50.0℃) 1.0
oP-	Gating	0: close the door to determine; 1: open the door to determine the function.	(0~1) 1

Hn	Thermostat timing mode	0: minute timer; 1: hour timing	(0~1) 0
rH-	Scale value	The maximum of the temperature settings	65.0

Chapter 4 Maintenance

1. Flammable and volatile chemicals not in the box.
2. If in the course of the odor, odor smoke, immediately turn off the power supply, users do not blindly repair, the Company shall promptly notify the service department, to view the repair by professionals.
3. The surface of the walls of the box liner and equipment to regular cleaning to maintain cleanliness, increase the transparency of the glass. Do not use acids, alkalis or other corrosive solution to wipe the outer surface.
4. Device unused for long periods, unplug the power cord in order to prevent equipment damage, and periodically (usually quarterly) by the conditions of use to run 2-3 days to get rid of the moisture of the electrical part, to avoid damage of the device.

Electrical wiring of diagram



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