

User Manual



Please read the manual before installation and operation.

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Growth Chamber Instruction

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Thanks for purchasing the equipment, please carefully read the manual before operating.

1.Precautions

- 1) Handle carefully, the tilt should not exceed 45 ° and can not be transported upside down. After placing the equipment, lock the front casters to make the chamber stable.
- 2) **To protect the compressor, please turn on the instrument after 48 hours when placed.**
- 3) Connect the power supply, the power socket should be reliably grounded.
- 4) The device should be placed in a place that is protected from sunlight, cool and ventilated. The distance between the device and the wall must be more than 10 cm. Handle with care, the angle with the ground level should not be less than 45 °.
- 5) In order to maintain the good appearance of the equipment, please do not wipe the machine surface with acid or alkali or corrosive substances. The inside and outside of the instrument can be regularly cleaned with dry cloth.
- 6) In order to obtain good working performance of the equipment, the difference between the working temperature and the environment should not be too large, and the ambient temperature should preferably be $(20 \pm 5) ^\circ\text{C}$.
- 7) Fuse is installed at the back of the control box for this equipment. If the equipment is not powered, please check whether the fuse tube is intact. Please cut off the power before checking and replacing the fuse tube and replace the same type and specifications!
- 8) Fans are installed in the operation room. Don't insert your fingers or objects into the fan cover to avoid safety accidents and damage to the fan. Please cut off the power before changing the fan.
- 9) Please turn off the power switch when stop use.
- 10) Do not store flammable or explosive materials or hazardous materials in the instrument working room.
- 11) There is an overflow pipe on the back of this device. A small amount of water will be

discharged during use. Please use a leather pipe to connect to the container or the sewer.

12) There is a drain pipe at the back of the device. When the device is not in use, water is drained from the inside of the chamber.

13) Store in a relative humidity not exceeding 80%, non-corrosive gas and well-ventilated room.

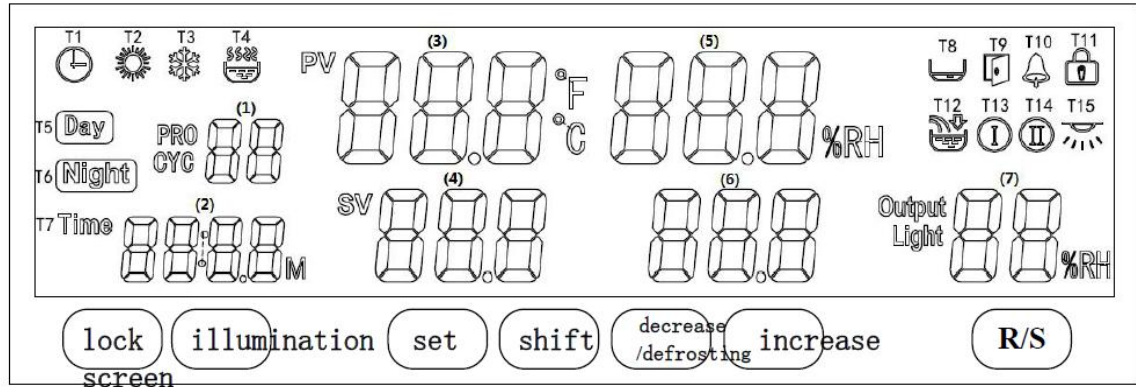
2. Application

The Growth Chamber is suitable for plant growth and tissue culture, seed germination, seedling raising, microbial cultivation tests and feeding of small insects. It's widely used for BOD test of water quality ; aging and service life test of medicinal materials, wood and building materials, etc. It is an ideal test equipment for light, constant temperature and constant humidity

3. Technical Specifications

Model Parameter	LAC-175-N	LAC-275-N	LAC-375-N	LAC-475-N	LAC-800-N	LAC-1075-N
Nominal capacity	175 L	275 L	375 L	475 L	800 L	1075 L
Temperature control range(°C)	With Illumination: 10 ~ 55 ° C Without Illumination: 5 ~ 55 ° C					
Temperature resolution(°C)	0.1 °C					
Temperature fluctuation(°C)	≅ ±1.5 °C					
Temperature uniformity(°C)	≅ ±2 °C					
Humidity control range (RH)	30% ~ 95%					
Humidity deviation	±3% RH					
Rated power (W)	860W	1700W	2100W	4000W	5000W	6000W
Illumination (Lx)	0~10000LX	0~15000LX	0~20000LX	0~21000LX	0~22000LX	0~25000LX
Power supply	220±10%V 50Hz					
Working environment(°C)	+5~35 °C					
Working hours	continuous					
Shelf(Standard)	3pcs					

4. Instrument panel instructions



1) Identifier definition

T1 Reservation: When entering the appointment timing state, T1 flashes,

【(2) display window】 displays the scheduled countdown time;

T2 Heating: When heating has an output, T2 lights up;

T3 Compressor: When the compressor starts, T3 lights up; when the compressor is waiting for the start delay, T3 flashes;

T4 Humidification: When humidification has output, T4 lights up;

T5 Day: When entering day mode, T5 lights up;

T6 Night: When entering the night mode, T6 lights up;

T7 Timing: When entering the running timing state, T7 flashes, 【(2) display window】 displays the timing countdown time;

T8 Water shortage: When there is water shortage signal, T8 lights up; when there is water shortage alarm, T8 flashes;

T9 Opens the door: When the door is open, T9 lights up;

T10 Alarm: When there is temperature and humidity alarm, T10 lights up; when entering low temperature or high temperature protection state, T10 flashes;

T11 Lock screen: When entering the lock screen state, T11 lights up;

T12 Add water: When the pump has output, T12 lights up;

T13 Defrosting: When the defrosting has an output, T13 lights up;

T14 Solenoid valve: When the solenoid valve has output, T14 lights up;

T15 Illumination/Sterilization: T15 lights up when there is output from the light; T15 flashes when sterilization has output (high priority for sterilization)

2) Definition for display window

(1) : Cycle or segment value;

(2) : timing or time setting value;

(3) :temperature measurement value;

(4) Display window: temperature setting value;

(5) : humidity measurement value;

(6) : humidity setting value;

(7) : Illumination set value or heating output

3) Button definition

Lock	Under normal display, long press the key for 2 seconds to manually lock or unlock the screen.
Light	Under normal display, press the key to turn on the light inside
Set	In the normal display, press the key to enter the modification interface of setting value , long press the key for 3 seconds to enter the parameter modification interface.
Shift	In the setting state, press the key to make the setting value shift and modify. If running mode, can switch the display for segments or cycle.
Increase	Press the key in the setting state to increase the setting value.
Decrease	Press the key in the setting state to decrease the setting value.
Run/Stop	In the normal display state, press this key to start or stop the operation

5.Operation instruction

Temperature ,humidity and light setting

Before setting the temperature and humidity, please fill the equipment with pure water until the upper limit of the water level.Turn on the power switch and press the Run/Stop key to start the operation.

Temp. Set: Press the set key, the number in (4) display window flashes, can set the temperature by pressing shift, increase and decrease key.

Humidity Set: Press set key again, the number of (6) display window flashes, can set the required humidity by pressing shift, increase and decrease key.

Light Set: Press set key again, the number of (6) display window flashes, can set the required light by pressing shift, increase and decrease key.

1) The controller is powered on, 【(3) display window】 displays "PS", 【(5) display window】 displays "V02", the buzzer beeps briefly, and enters the normal display state after about 2 seconds.

2) Set value modification

In the normal display state, click the 【Set】 key, and the "TIME" and "SV" identifiers will flash at the same time. At this time, the numeric value of the cursor blinking can be modified by the 【Shift】 , 【Increase】 , and 【decrease】 keys. Click 【Set】 key again to switch to the next set of values. After the modification is completed, press and hold the 【Set】 key for 1 second to exit the setting state, or in the setting mode, click the 【Set】 key continuously to modify a group of data and exit. The buzzer beeps once and enters the normal display interface, parameters are automatically saved.

When the controller is running in the program mode, click the【Set】 key, and the segment

number display value starts to flash. At this time, you can modify the value of the segment by using the **【Increase】** and **【Decrease】** keys. You can view the time, temperature, humidity, and light setting values for the corresponding number of segments. Click the **【Set】** key again to modify the setting parameters under the current segment in turn. When the cursor returns to the segment value blinking, modify the segment value again to carry out the modification of the next segment.

When the controller is running in **【Day / Night】** mode, click the **【Set】** button, and the "DAY" identifier will blink. By clicking the **【Increase】** and **【Decrease】** buttons, you can switch the "NIGHT" identifier to blink, view the setting parameters of day and night, and click the **【Set】** button to modify the setting parameters in day or night mode.

3) Number of segments or cycles setting

In non-constant mode (see User parameter table -1-U1 for details), when the controller stops running, press and hold the **【SET】** key for 3 seconds, **【(1) display window】** displays the "Lc" prompt, **【(2) Display window】** The password value is displayed. Change the password value to 3 by **【Increase】** **【Decrease】** to enter the cycle and segment number settings.

In the program mode, if the "PRO" prompt flashes, you can set the value of the total running segment; click the **【Set】** key, and when the "CYC" prompt flashes, you can set the total number of running cycles (when the number of cycles is set to 0, The controller is always running). After the setting is completed, press and hold the **【Set】** key for 3 seconds to exit the setting and the parameters are automatically saved.

In the day and night mode, there isn't setting of the total number of running segments, only the period can be set.

4) Start and stop

Long press the **【Run / Stop】** key U7 (see user parameter table-1 for details) to start the controller. The **【(2) display window】** displays the remaining running time during running; when the running time is reached, the controller stops running and beeps. The device tweets U9 (see user parameter table-1 for details) seconds, **【(2) display window】** displays "End", or long press the **【R / S】** key U7 seconds to stop the controller operation,

【(2) display window】 "OFF" is displayed.

When the controller is running in the program mode and the total number of segments is greater than 1, if the constant temperature and humidity conditions (see parameter table 1-U5, U6) are not turned on, you need to set the time to turn on the operation and set the time to 0 start invalid.

5) Appointment function

When the value of the reservation function (Appointment setting -7) is set to 1, click the 【Set】 key again to set the reservation time, the unit is minute, otherwise exit directly to enter the normal display interface.

After setting the preset timing, you need to click the 【Run / Stop】 key to activate the operation. In the timing of the reservation, you can enter the parameter table again to modify the reservation time, or click the 【Run / Stop】 key to stop the controller operation. The running setting time is automatically cleared and is only valid once.

6) Fault prompt

Temperature alarm: "°C" flashes quickly when there is a temperature upper deviation alarm, and "°C" flashes slowly when the temperature lower deviation alarm;

Humidity alarm: "% RH" flashes quickly when there is a upper deviation alarm on humidity, and "% RH" flashes slowly when there is a lower deviation alarm on humidity;

If 【(3) display window】 shows "---", it means that the temperature sensor or controller itself is faulty. Please check the temperature sensor and its wiring carefully.

7) Defrosting function

The defrost function can be turned on automatically or manually. Automatic start (see internal parameter table-5). Defrost interval and defrost time are set by the user. Manual start means that in the main interface, manually click the 【defrosting】 button to start the defrost manually. The manual defrost time still uses the time set in the parameter table. When the delay time expires, the defrost automatically ends.

8) Power-down memory function

By modifying the power-down memory parameter value (see "U2" parameter: User parameter table -1 for details), you can choose whether to have power-down memory

function.

6.Viewing and setting of internal parameters

In the normal display state, press and hold the **【Set】** key for 3 seconds, **【(1) Display window】** displays the password prompt "Lc", **【(2) Display window】** displays the password value. Enter a different password value to enter the internal parameter setting state. , And then click the **【Set】** button to modify each parameter. Press and hold the **【Set】** key for 3 seconds again, the buzzer will beep once, exit this state, and the parameter value is automatically saved.

User parameter table -1

Parameter indicating	Name of parameter	Parameter function description	(Range) Factory value
Lc	password	When "Lc = 9", you can view and modify the parameter value.	0
U1	Operating mode	0: fixed value operation mode; 1: day and night mode, 0 ~ 99 cycle; 2: Program mode, programmable 1 ~ 30 segments, 0 ~ 99 cycles.	(0~2) 0
U2	Power down Operation mode	0: Not running; 1: Run from the first section (daytime); 2: Run from power off time.	(0~2) 0
U3	Timing correction	Correct the total timing timing error, Correction value = 【running time (seconds)-actual time (seconds)】 * 10 ÷ actual time (minutes).	(-999~999) 0
U4	Timing unit	1: minute 0 ~ 9999; 2: hour 0 ~ 9999	(1~2) 1
U5	Constant temperature timer deviation	The temperature measurement value is within U5 of the set value, and the timer starts. Note: 0 means there is no need to judge the temperature when timing.	(0~10.0℃) 0
U6	Humidity timer deviation	The humidity measurement value is within U6 of the set value, and the timer starts. Note: 0 means no need to judge humidity when timing.	(0~50.0%) 0
U7	【R / S】 key Effective time	After long pressing U7, the 【R /	(0~10s) 0

		S】 function key becomes effective.	
U8	Lock screen time	Automatic screen lock time, no automatic screen lock at 0.	(0~300s) 0
U9	End of operation Prompt time	After the operation is finished, the beep will prompt the time. Note: 0 means continuous tweet.	(0~300s)0
UA	lighting time	After the lighting is turned on, the lighting time is automatically turned off. Note: 0 means the lighting must be turned off manually.	(0~9999min)0
Ub	mailing address	Local communication address.	(1~16)1

Temperature parameter table -2

Parameter indication	parameter name	Parameter function description	(Range) Factory value
Lc	password	When "Lc = 103", you can view and modify the parameter value.	0
TH	Upper deviation Over temperature alarm	If "Measured value > Set value + TH", upper deviation alarm will be turned on and temperature and humidity output will be turned off. During the alarm, the temperature alarm relay has output, the buzzer beeps, the alarm indicator lights up, the temperature unit flashes quickly, click any key to cancel the beep, and the relay turns off the output.	(0~20.0℃) 5.0
TL	Lower deviation Over temperature alarm	If "measured value < set value + TL", the lower deviation alarm is issued. During the alarm, the temperature alarm relay has an output, the buzzer beeps, and the temperature unit flashes slowly. Click any key to cancel the beep. Note: When "TL = 0", this function is invalid.	(-50.0~0℃) 0
Tb	Deviation correction	Correct the error caused by sensor (low temperature) measurement; $T_b = \text{actual temperature value} - \text{meter measurement value}$.	(-99.9~99.9℃) 0
TA	Slope correction	Correct the error caused by sensor (high temperature) measurement; $TA = 1000 * (\text{actual temperature value} - \text{instrument measurement value}) \div \text{instrument measurement value}$.	(-999~999) 0
TP	Heating ratio	Time proportional effect adjustment.	(0.1~50.0)8.0
TI	Heating integral	Integration action regulation.	(1~2000s) 500

TD	Heating differential	Differential action regulation.	(0~2000s) 200
TT	Heating cycle	Heating control cycle.	(1~60s) 5
Tc	Low temperature control Heating off	The non-heating point during low temperature control is valid only when the temperature setting is lower than the ambient temperature.	(-2.0~0°C) -0.5
To	heating power	Percentage of maximum power output from heating.	(0~100%) 100
Tu	Refrigeration on	When the compressor is in manual start-stop mode and the compressor is in off-type control, if "Measured temperature \geq set temperature + Tu", turn on the compressor.	(-10.0~10.0°C) 0.6
Tn	Cooling off	When the compressor is in manual start-stop mode and the compressor is in disconnected control, if "Measured temperature \leq set temperature + Tn", turn off the compressor.	(-10.0~ uP) 0.6

Humidity parameter table -3

Parameter indication	parameter name	Parameter function description	(Range) Factory value
Lc	password	When "Lc = 203", you can view and modify the parameter value.	0
HH	Upper deviation Super Humidity Alarm	If "humidity measurement value > set value + HH", the upper deviation alarm is turned on, the super-humidity alarm relay is turned off and the humidity output is turned off. The humidity alarm relay has an output when the alarm occurs, the alarm indicator lights up, the humidity unit flashes quickly, and the relay turns off the output.	(0~50.0%) 20.0
HL	Lower deviation Super Humidity Alarm	If "humidity measurement value < set value + HL", the lower deviation alarm is issued. The humidity alarm relay has an output when the alarm occurs, the alarm indicator lights up, and the humidity unit flashes quickly. Note: This function is invalid when "HL = 0".	(-50.0~0%) 0
Hb	Deviation	Correct the error caused by the	(-99.9~99.9%)

	correction	sensor (low humidity) measurement; Hb = Actual Humidity Value-Meter measurement Value.	0
HA	Slope correction	Correct the error caused by the sensor (high humidity) measurement; HA = 1000 * (actual humidity value-instrument measurement value) ÷ instrument measurement value.	(-999~999) 0
HP	Humidification ratio	Time proportional effect adjustment	(0.0~90.0) 10.0
HI	Humidification Points	Integration action regulation	(1~999s) 200
Hd	Humidification differential	Differential action regulation.	(0~999s) 30
HT	Humidification cycle	Humidification control cycle	(0~60s) 5
Hc	Low humidity control Humidification shutdown	No humidification point during low humidity control	(-50.0~50.0%) 0.0
Ho	Humidification power	Humidification output maximum power percentage	(0~100%)100
Hu	Dehumidification on	When the compressor is in the manual start-stop mode and the compressor is in the off-type control, if "Measurement Humidity ≥ Set Humidity + Hu", turn on the compressor.	(Hn~20.0%) 3.0
Hn	Dehumidification off	When the compressor is in the manual start-stop mode and the compressor is in the off-type control, if "Measurement humidity ≤ set humidity + Hn", turn off the compressor.	(-20.0%~Hu) 3.0
HE	No humidification point	When the compressor works in intermittent mode, if the set value meets the conditions, you can modify this value and turn off humidification in advance.	(0.0~10.0) 2.0

Compressor Parameter Table -4

Parameter indication	parameter name	Parameter function description	(Range) Factory value
Lc	password	When "Lc = 109", you can view and modify the parameter	0

		value.	
C1	Ban compressor Operating temperature	When "temperature measurement value \geq C1", the compressor is absolutely prohibited to work.	(0~100.0℃)80.0
C2	Without compressor Operating temperature	When "temperature set value \geq C2", only start the compressor once the temperature measurement value is higher than the temperature set value.	(0~100.0℃) 42.0
C3	Normally open temperature point	When "temperature set value \leq C3", the compressor works in a balanced manner.	(-15.0~100.0℃) 0.0
C4	Normally open humidity point	When the "humidity setpoint \leq C4", the compressor works in a balanced manner. (If one of the conditions that normally open temperature point and normally open humidity point is met, the compressor will work in a balanced manner)	(0~100.0%) 10.0
C5	Way of working	0: Automatically obtain refrigeration and automatic dehumidification thresholds; 1: Set refrigeration manually and obtain dehumidification threshold automatically; 2: Obtain refrigeration automatically and set dehumidification threshold manually; 3: Set refrigeration manually and set dehumidification threshold manually. Note: Only valid when the compressor is in disconnected operation	(0~3) 3
C6	compressor Start delay	Compressor startup delay protection time, the minimum time interval from compressor stop to restart.	(0~600s) 180
C7	Defrosting method	0: No defrost function; 1: Solenoid valve defrost method; 2: Defrosting method of heating tube.	(0~2) 0
C8	Defrosting interval 1	Defrost time interval when "temperature setting value \leq 8.0 ℃". Note: 0 means that there is no automatic defrost in this section, which can be turned on manually.	(0~9999min) 0

C9	Defrosting interval 2	Defrosting time interval when "8.0 °C <temperature set value≤16.0 °C". Note: 0 means that there is no automatic defrost in this section, which can be turned on manually.	(0~9999min) 0
CA	Defrosting interval 3	Defrost time interval when "16.0 °C <temperature set value≤24.0 °C". Note: 0 means that there is no automatic defrost in this section, which can be turned on manually.	(0~9999min) 0
Cb	Defrosting time 1	Defrost opening time when "temperature setting value ≤ 8.0 °C". Note: 0 means no defrost in this section.	(0~200s) 0
Cc	Defrosting time 2	Defrost opening time when "8.0 °C <temperature set value≤16.0 °C". Note: 0 means no defrost in this section.	(0~200s) 0
Cd	Defrosting time 3	Defrost opening time when "16.0 °C <temperature set value≤24.0 °C". Note: 0 means no defrost in this section.	(0~200s) 0
CE	Solenoid valve function	-2: No solenoid valve function; -1: When the compressor needs to be turned on, if the turn-on delay time is up, the solenoid valve is turned on first, and the compressor is turned on after 10 seconds; 0: Normally open solenoid valve mode; 1: See CF parameters for details.	(-2~1) -2
CF	Solenoid valve open	If CE = 0, when "temperature measurement value <temperature set value-CF", the solenoid valve opens; when "temperature measurement value> temperature set value + CF", the solenoid valve closes; If CE = 1, when "temperature set value ≥ CF", the solenoid valve opens; when "temperature set value <CF", the solenoid valve closes.	(0~50.0°C) 0

Internal parameter table -5

Parameter indication	parameter name	Parameter function description	(Range) Factory value
Lc	password	When "Lc = 209", you can view and modify the parameter value.	0
P1	Illumination selection	0: no light; 1: 3 levels in total; 2: 4 levels in total; 3: 5 levels in total; 4: 6 levels in total; 5: 10 levels in total (cold light source 0 ~ 10V output).	(0~5) 4
P2	Humidity selection	0: No humidity; 1: Display humidity only; 2: Controllable humidity.	(0~2) 2
P3	Internal parameter	Reservation can be set	(0~9999) 0
P4	temperature Set upper limit	Maximum temperature setpoint	(P5~99.9℃) 60.0
P5	temperature Set lower limit	Minimum temperature setpoint	(-19.9~P4℃) 0.0
P6	Humidity input Upper voltage limit	Input voltage corresponding to 100% humidity	(P7~5000mV) 3000
P7	Humidity input Lower voltage lower limit	Input voltage corresponding to 0% humidity	(0~P6mV) 0
P8	Low temperature protection	When the "temperature measurement value or temperature setting value ≤ P8", the humidity is not controlled, only the temperature is controlled, and the alarm light flashes slowly.	(-25.0~30.0℃) 0
P9	High temperature protection	When the "temperature measurement value ≥ P9", the operation stops, all outputs are turned off, and the alarm lamp flashes quickly.	(0~105.0℃)100.0
PA	temperature Filter coefficient	Adjusting temperature sensitivity	(1~200) 20
Pb	humidity Filter coefficient	Adjust humidity sensitivity	(1~200) 20
PC	Input selection	0: Gated closed door open, water level closed and water shortage;	(0~3) 0

		1: Gated disconnect door open, water level closed and water shortage; 2: Gated closed door open, water level disconnected and lack of water; 3: The door is disconnected, the door is opened, and the water level is disconnected.	
Pd	Water level delay Water time	If Pd > 0, extend the Pd time after the water is full and turn off the water; If Pd < 0, water shortage is detected, and water is added after delaying Pd time.	(-20~20s) 5
PE	humidity Decimal place selection	0: No decimal; 1: Decimal displayed.	(0~1) 0
PF	temperature display Insensitive zone	Insensitive area for temperature display	(0~10.0℃) 0.1
PH	Humidity display Insensitive zone	Humidity display insensitive area	(0~50.0%) 1.0

Ambient temperature -6

Parameter indication	parameter name	Parameter function description	(Range) Factory value
Lc	password	When "Lc = 18", you can view and modify the parameter value.	0
nH	Ambient temperature	Controller's ambient temperature, and the value after bH, oH correction.	Unchangeable
bH	Ambient temperature correction	Correct the error caused by the ambient temperature measurement. bH = actual ambient temperature value - nH	(-20.0~20.0℃) 0.0
oH	Illumination correction	When there is light output, the first-level light corresponds to the ambient temperature change value. Setting to 0 means no thermal light source temperature compensation.	(0~10.0℃) 0.0

Appointment setting -7

Parameter indication	parameter name	Parameter function description	(Range) Factory value
Lc	password	When "Lc = 36", you can view and modify the parameter value.	0
AP	Appointment setting	0: Disable the appointment function; 1: Turn on the appointment function.	(0~1) 0
T_	appointment time	When the AP value is selected to be 1 on, click the setting button again to set the reservation time.	0~9999min 0

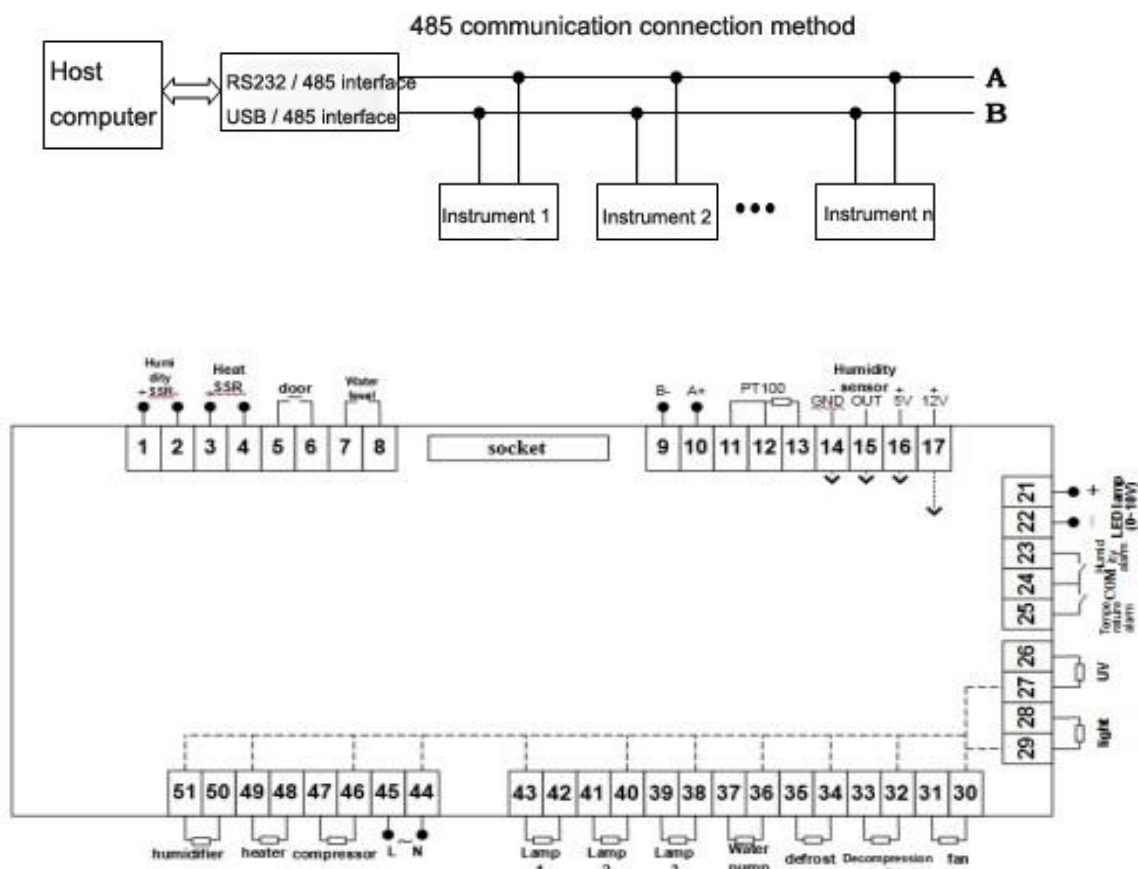
Sterilization On -8

Parameter indicating	parameter name	Parameter function description	(Range) Factory value
Lc	password	When "Lc = 72", you can view and modify the parameter value.	0
Sr	Sterilization open	0: Off; 1: On.	(0~1)0
ST	Sterilization time	After sterilization is turned on, the sterilization time is automatically turned off. Note: 0 means sterilization must be turned off manually.	(0~9999min)0

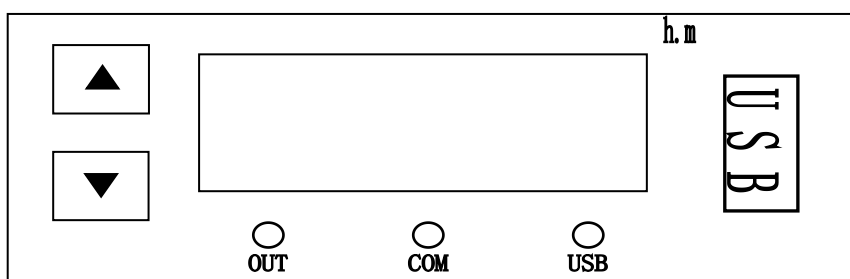
Restore factory value -9

Parameter indication	parameter name	Parameter function description	(Range) Factory value
Lc	password	When "Lc = 567", you can view and modify the parameter value.	0
rST	Restore factory value	0: Do not restore the factory value; 1: Restore factory value; 2: Save the factory value.	(0~2) 0

7.Wiring diagram







8.Printer Instruction







1. Time display: in normal conditions, display the current time (hours and minutes)
2. OUT indicator: the light turned on, indicates that there is a printout or data is written to the U disk;
3. COM indicator: flashing light indicates the current communication is normal;
4. USB indicator: the light turned on means that the current U disk has been correctly

inserted and data can be written;

5.  Increase key: Under normal state, click or long press the key to increase the printing interval time setting value. Under parameter setting state, click or long press the key to increase the parameter setting value, when the time setting value is the maximum, then press this key again will automatically flip to the minimum value;
6.  Decrease key/OK key: Under normal state, click or long press the key to decrease the setting value of printing interval time. Under parameter setting state, click this key to switch the setting parameters, long press the key to exit the setting and save the set value;
7.   : Under normal status, long press two keys at the same time, after 3 seconds, enter the parameter setting state

Operation for printer

1) After powered on, the digital tube and the indicator light are all on for 3 seconds and then enter the running state. PRT indicator lights on, time window displays the current time (hours and minutes), the printer prints "Print Test", "Current Date", "Current Data" in sequence, the OUT indicator lights up when printing out. The data is printed according to the printing interval. When the date changes, the date is printed.

2) Under normal conditions, click  or  to set the printing interval. The setting range is from 1 to 9999 minutes; in normal status, long press the button   for 3 seconds at the same time to enter the password input state, enter the corresponding password to adjust the time and parameters.

Tips for abnormal phenomenon:

Time display shows TErr: communication error,

- 1) Check whether the instrument communication line is connected correctly;
- 2) Check whether the power of the instrument is turned on;

Time display shows UErr: U disk read and write error,

-
- 1) Check whether the U disk is inserted correctly;
 - 2) Format the U disk or replace the U disk;
 - 3) If don't need U disk storage, can enter the internal parameters to close the U disk function; (if needed, pls contact supplier)

The time display shows PErr: the printer is wrong;

- 1) Check if the printer cable is connected correctly;
- 2) Check the indicator light on the printer, if it does not light, please confirm whether the printer power cord is connected correctly;
- 3) If do not need the printing function, can enter the internal parameters to close the printing function (if needed, pls contact supplier)

Printer indicator flashes: replace printing paper

9.USB Instruction

Step 1: Install software

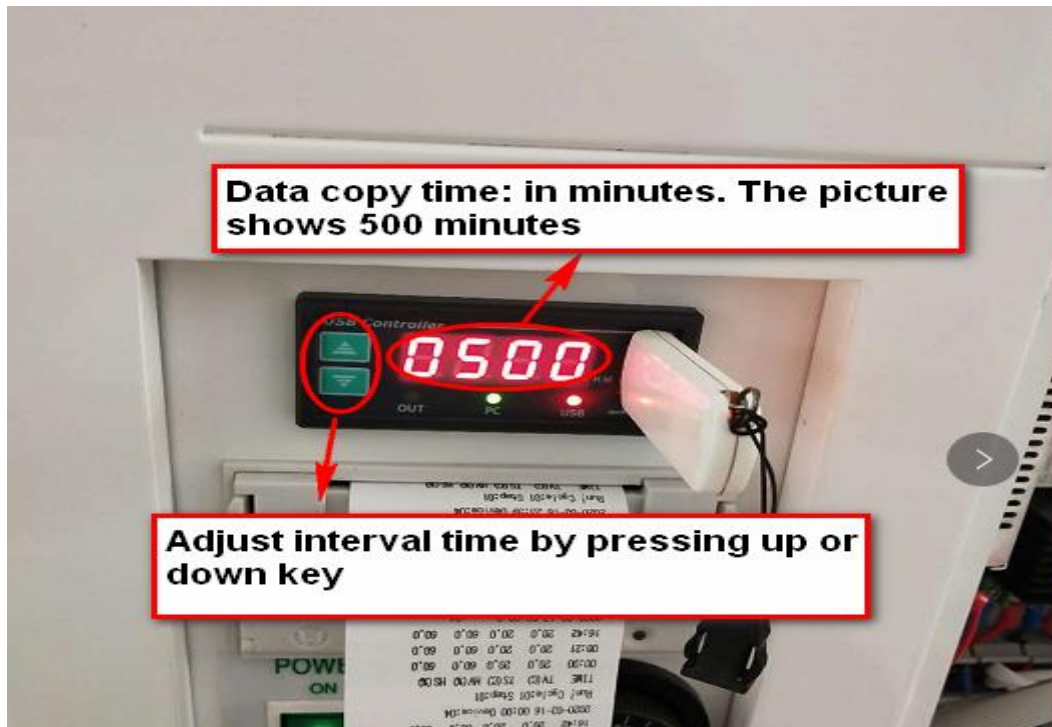


Step 2: Copy data

- (1) Find the USB interface on the lower right side of the instrument and plug in the USB disk.



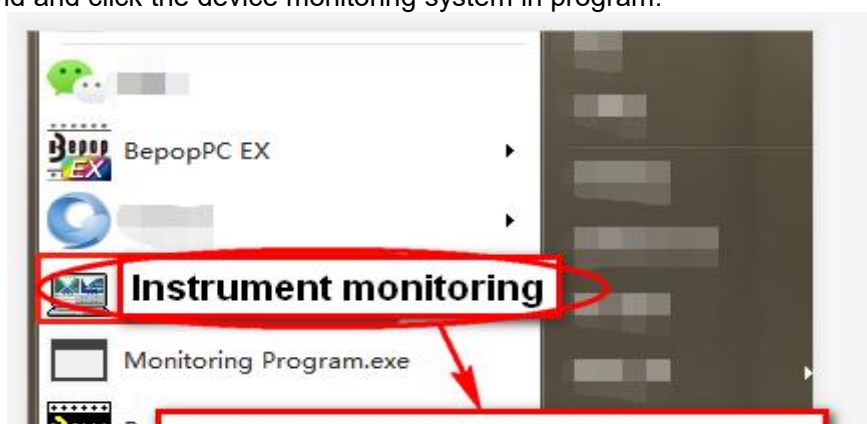
(2) Adjust the interval time according to your experiment requirements.



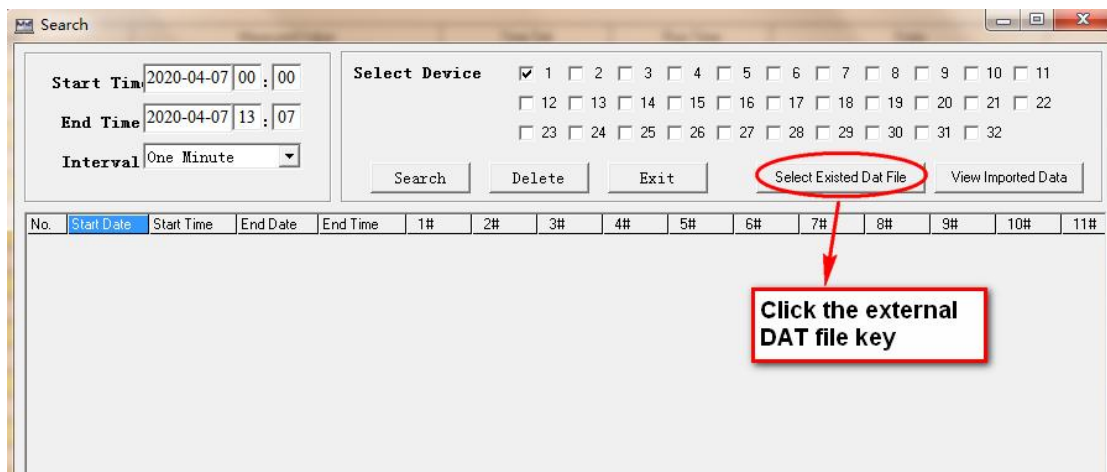
(3) As picture shows: data exporting (printer and data export normal).



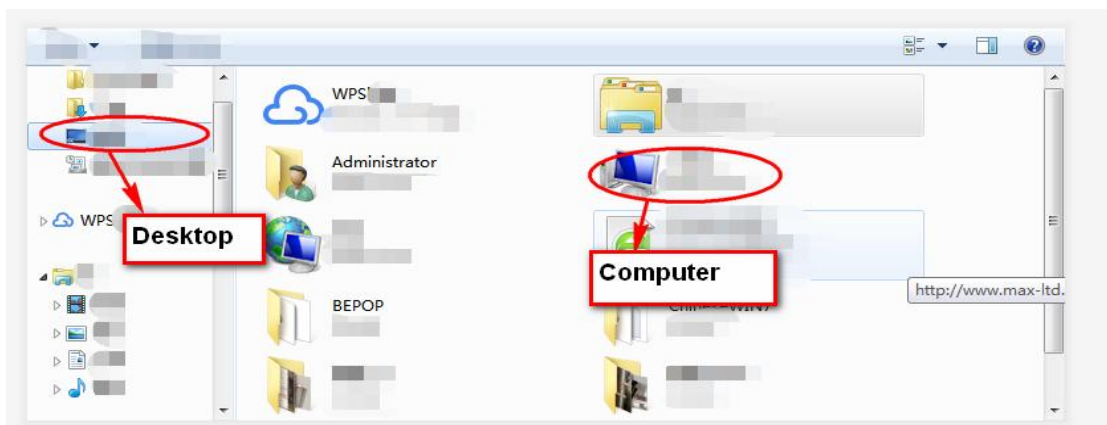
Step 3: Find and click the device monitoring system in program.



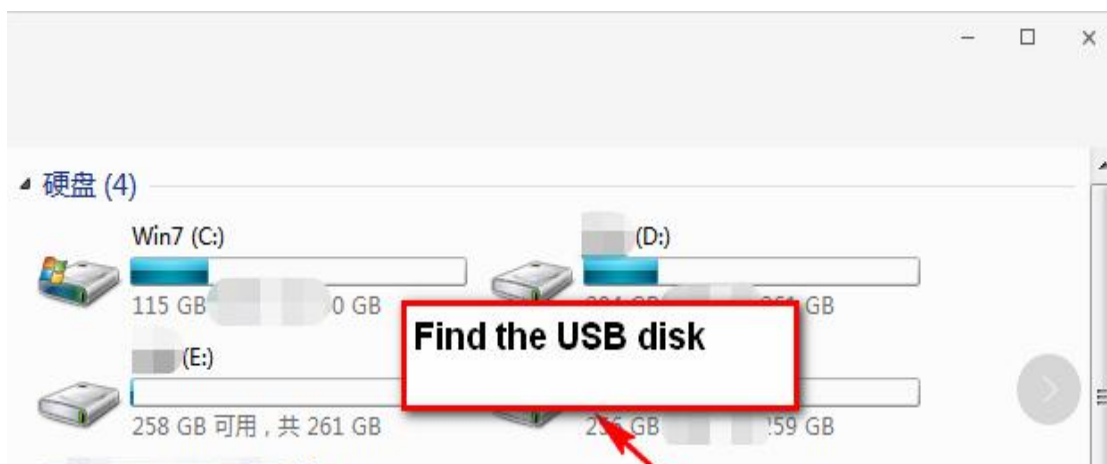
Step 6: Click the external DAT file key (Insert the USB with data from instrument to the computer before this operation).



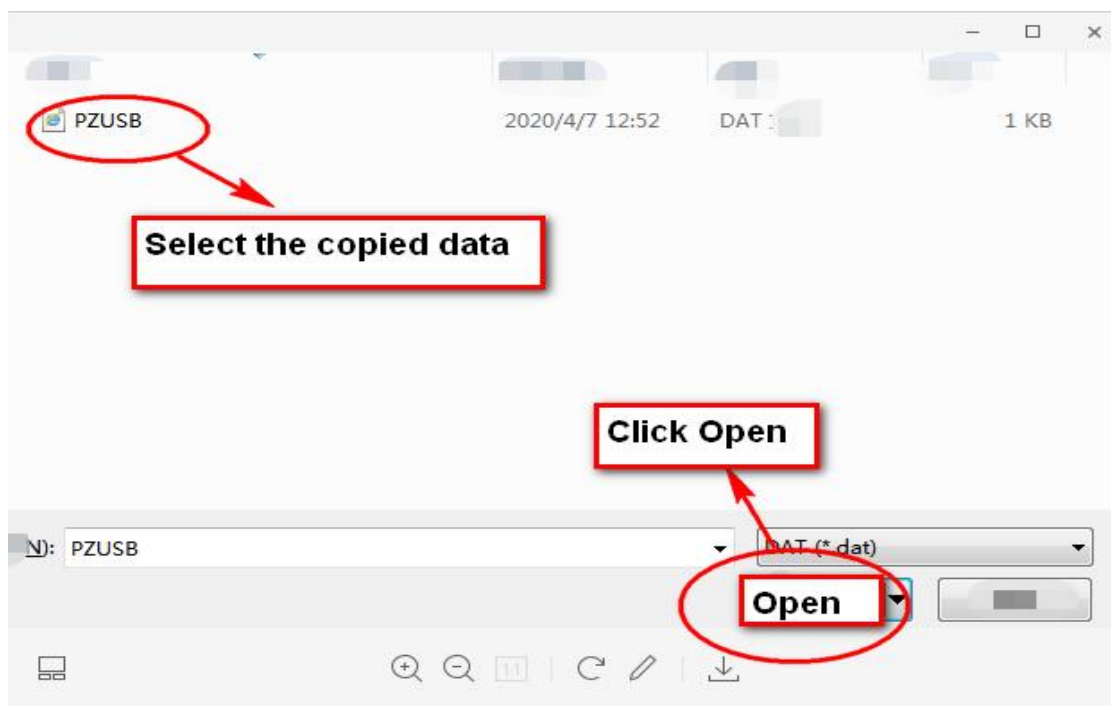
Step 7: Click on the desktop to find the computer and click to enter the computer.



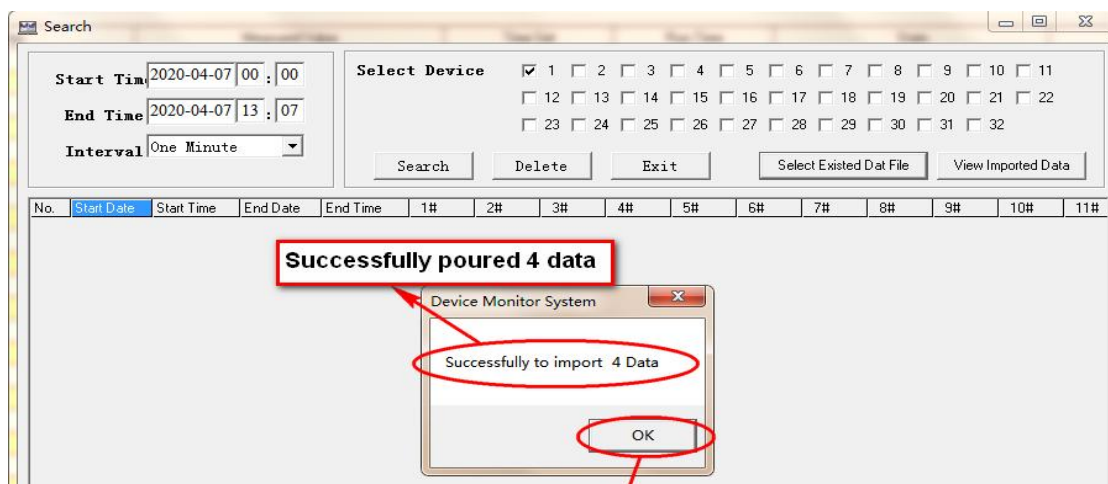
Step 8: Find the USB disk with data and enter



Step 9: Find the copied data and click open to enter.



Step 10: After entering, it will show that XXX data has been successfully imported and click ok to enter.



Step 11: Enter this step, you can see all the data imported successfully and storage status.

The screenshot shows a 'History Data Report' window with a table of imported data and a sidebar with control buttons. Red circles highlight the 'Start Time', 'End Time', 'Interval', 'Print', 'Draw Curve', and 'Export Data' buttons. Red boxes with arrows provide instructions for each button and a summary of the data.

No.	Happen Date	Happen Time	ID	Device Type	Real Temp	Set Temp	Real Humidity	Set Humidity	Real Illumination	Set Illumination
1	2020-04-07	12:49:16	1	Con Temp&Hum	50.100	50.000	4.200	60.000	0.000	0.000
2	2020-04-07	12:50:52	1	Con Temp&Hum	50.000	50.000	4.200	60.000	0.000	0.000
3	2020-04-07	12:51:52	1	Con Temp&Hum	50.000	50.000	4.200	60.000	0.000	0.000
4	2020-04-07	12:52:52	1	Con Temp&Hum	49.800	50.000	4.200	60.000	0.000	0.000

Start Time
2020-04-07
12:49:16

End Time
2020-04-07
12:52:52

Interval
One Minute

Print

Draw Curve

Export Data

Exit

The time here refers to the time when you insert the USB disk into instrument to start and end the export data

Interval time means: the time between the first and second group of copy data, the interval time can be adjusted according to your experimental requirements

Click print data to print out the data imported.

Imported data can be viewed in curves

Export data: The imported data can be saved on

Successful imported 4 groups of data

10. Troubleshooting

Phenomenon	Reason	Solution
1. No power	1. Outlet without power	1. Check socket
	2. The plug is not inserted or disconnected	2. Insert the plug or wire
	3. Broken fuse	3. Replace the fuse tube of the same model

	4. The power switch is not closed	4. Close the power switch
2. Large temperature error in the chamber	1.Sensor is broken	1. Replace the sensor
	2.Fan is broken	2.Change the fan
	3. Instrument is not corrected	3.Refer to the Instrument operation instructions
3. The temperature inside the box does not rise or fall	1. Set temperature is incorrect	1. Adjust the set temperature
	2. Temperature controller is broken	2. Change the temperature controller
	3. Loose cable	3. Tighten the connection cable
4. No humidification in the box	Internal humidifier is broken	1. repair the humidifier
5. without illumination	1. The lamp pin is loose or the lamp is broken	1. Eliminate loose or replace the lamp
	2. No power	2. Check the power
	3. If the lighting setting reasonable	3. Set the meter reasonably according to the instructions

11.After sales service

The warranty for the instrument is 1 year from delivery (except for the heating elements). If damaged due to non-human factors or can not work normally during warranty period, our company is responsible for free repair or replacement of product parts. Beyond the warranty, we try our best to provide convenience for users.



Note: The above maintenance operations should be performed by qualified personnel. Please turn off the power during maintenance! !!

12.Packing list

NO.	Name	Category	Quantity	Remark
1	Growth Chamber	Machine	1 set	
2	Shelf(standard)	Accessories	3pcs	

3	Instruction manual	Document	1pc	
4	Fuse tube	spare parts	1pc	
5	stopper	spare parts	1pc	

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