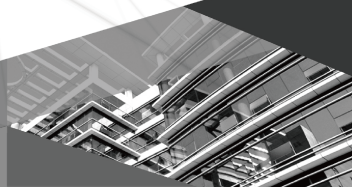# *Owner's Manual*

Original Instructions

Wired Controller XE70-11/H

Thank you for choosing this product. Please read this Owner's Manual carefully before operation and retain it for future reference.

To Users

Thank you for selecting C&H product. Please read this instruction manual carefully before installing and using the product, so as to master and correctly use the product. In order to guide you to correctly install and use our product and achieve expected operating effect, we hereby instruct as below:

(1) This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsibility for their safety. Children should be supervised to ensure that they do not play with the appliance.

(2) This instruction manual is a universal manual; some functions are only applicable to particular product. All the illustrations and information in the instruction manual are only for reference, and control interface should be subject to actual operation.

(3) In order to make the product better, we will continuously conduct improvement and innovation. If there is adjustment in the product, please subject to actual product.

(4) If the product needs to be installed, moved or maintained, please contact our designated dealer or local service center for professional support. Users should not disassemble or maintain the unit by themselves, otherwise it may

cause relative damage, and our company will bear no responsibilities.

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

Contents

1 Safety Notices (Please be sure to abide them)

WARNING: If not abide them strictly, it may cause severe damage to the unit or the people.

NOTE: If not abide them strictly, it may cause slight or medium damage to the unit or the people.

This sign indicates that the items must be prohibited. Improper operation may cause severe damage or death to people.

This sign indicates that the items must be observed. Improper operation may cause damage to people or property.

WARNING!

This product can't be installed at corrosive, inflammable or explosive environment or the place with special requirements, such as kitchen. Otherwise, it will affect the normal operation or shorten the service life of the unit, or even cause fire hazard or serious injury. As for the above special places, please adopt special air conditioner with anti-corrosive or anti-explosion function.

2 Operation Notices

■   The power supply for all hydro box must be unified.

■   Prohibit installing the wired controller at wet or sunshine places.

■   Do not knock, throw or frequently disassemble the wired controller.

■   Do not operate the wired controller with wet hands.

■   When two wired controllers control one (or more) hydro box(es), the address of wired controller should be different.
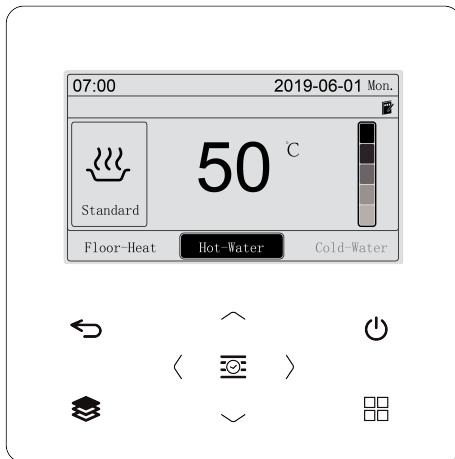
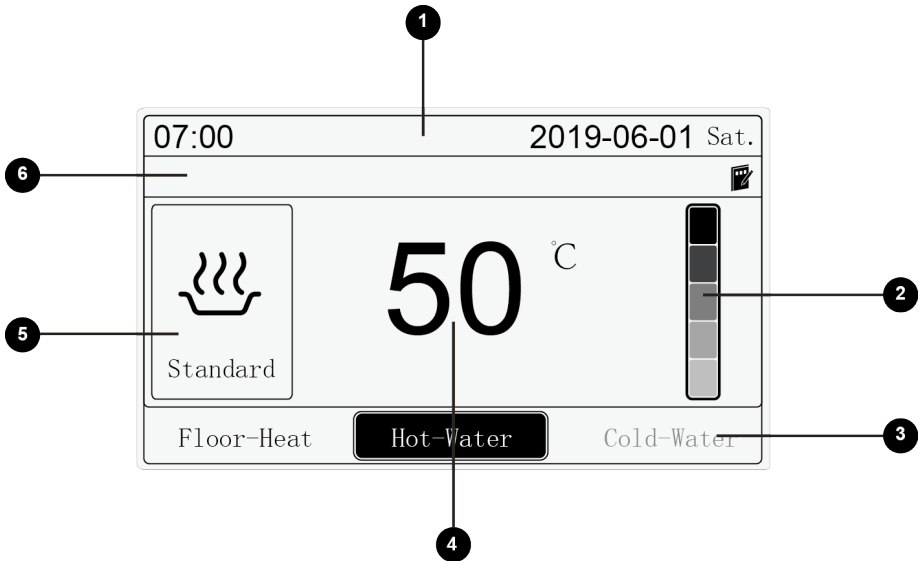# 3 Display

Fig 3.1 Appearance of the wired controller

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3.1 LCD of Wired Controller

Fig 3.2 LCD of wired controller

3.2 Instruction for LCD of Wired Controller

Table 3.1 Instruction for LCD of wired controller

No.	Name	Instruction
1	Time column	Display date and time
2	Available hot water	The proportion of available hot water for the current user is displayed according to the state in the frame for available hot water; it is displayed only at the interface for hot water
3	Interface mark	Current interface and startup status of floor heating and hot water
4	Temperature area	Display water tank temperature, outlet water temperature or set temperature
5	Mode	Display floor heating or hot water mode
6	Status	Display current status and function of the unit

Table 3.2 Instruction for wired controller icon

Icon	Name	Instruction
♨	Standard hot water	It means the current mode is the standard hot water mode
🌙	Night hot water	It means the current mode is the night hot water mode

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Icon	Name	Instruction
$\underset{\text{———}}{\text{\small$\int\int\int$}}$	Standard floor heating	It means the current mode is the standard floor heating mode
⊕	Schedule	Display when schedule function is enabled
✎	Memory	Memory status (when the unit is re-energized after power failure, the indoor unit will resume to the setting status)
✺	Sun-flower	It is displayed when the sun-flower function is valid
✦	High-temp sterilization	The icon will light up when the high-temp sterilization function is valid and will be blinking under sterilization
Ⓐ	Auto function	The corresponding interface will display this icon when automatic floor heating water temp. setting or automatic hot water temp. setting function is valid
⟨≋⟩	Rapid heat function	The corresponding interface will display this icon when rapid floor heating or rapid water heating function is valid
☀	Solar	It is displayed when the hydro box is connected to solar energy; Flicker when solar power is on work
🛡	Shield	It means the wired controller is in shielding status
▪━▪	Group control	It displays when a wired controller controls several hydro boxes at the same time
⬜	Slave wired controller	It means the wired controller is the slave wired controller
⟨☂⟩	Cycle	Running status of the back water pump

Icon	Name	Instruction
❄ (Anti-freeze symbol)	Anti-freeze	It displays under anti-freezing status
☼ (E-heater symbol)	E-heater	It displays when the auxiliary electrical heating is on
🔒 (Child lock symbol)	Child lock	It means the wired controller is in child lock status
☀ (Defrost symbol)	Defrost	It displays if the ODU is in defrosting status
🚫 (Invalid operation symbol)	Invalid operation	It displays when the operation is invalid
NOTE： When wired controller is connected with different hydro boxes, some functions will be different.		

4 Buttons

4.1 Button Graphics
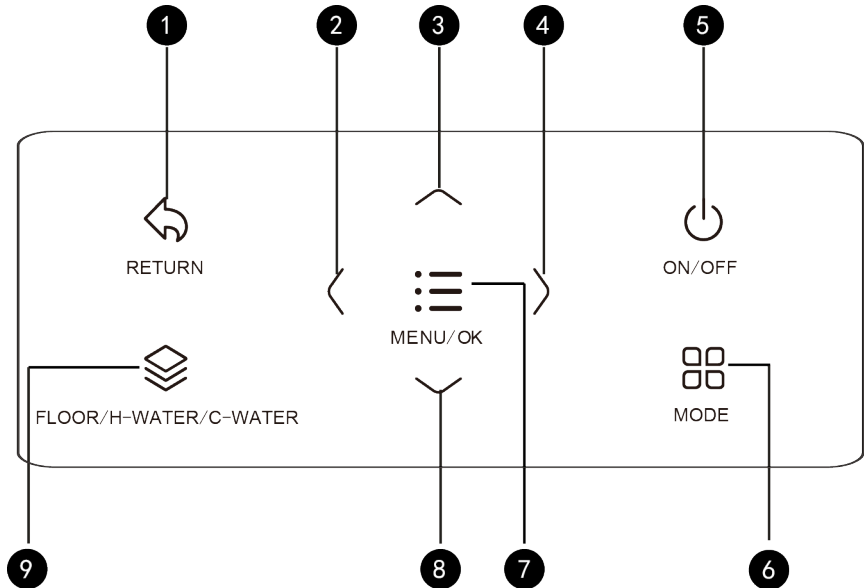
Fig 4.1 Button graphics

4.2 Instruction for Buttons

Table 4.1 Function instruction of buttons

Button No.	Button name	Button function
1	RETURN	Return to the previous interface
3	Up	Set water temperature; Move the cursor; Set or view parameters
8	Down	
2	Left	Turn page; Move the cursor; Set or view parameters
4	Right	
5	ON/OFF	Turn on/off hot water or floor heating function; return to the home page
6	MODE	Under hot water interface, it is used to switch the operation mode of hot water function
7	MENU/OK	Enter menu or confirm the set
9	FLOOR/H-WATER /C-WATER	Under home page, it is used to switch floor heating and hot water interface (The cold water function is reserved, and it is temporarily impossible to switch to the cold water interface)
3+8	Child lock	Simultaneously press " Up " and " Down " for 5s to enter or cancel the Child Lock function

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5 Installation and Commissioning

Unit: mm
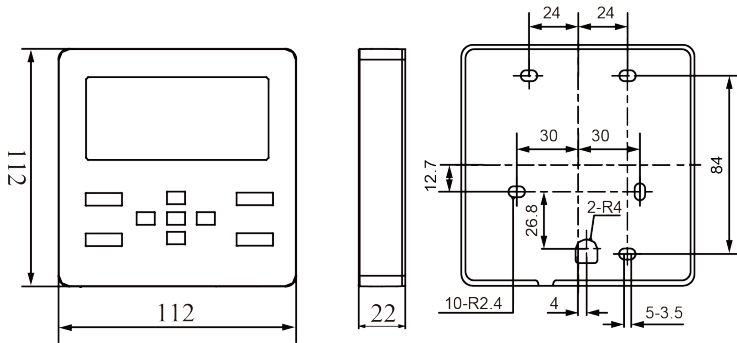
Fig 5.1 Dimension of wired controller

OR
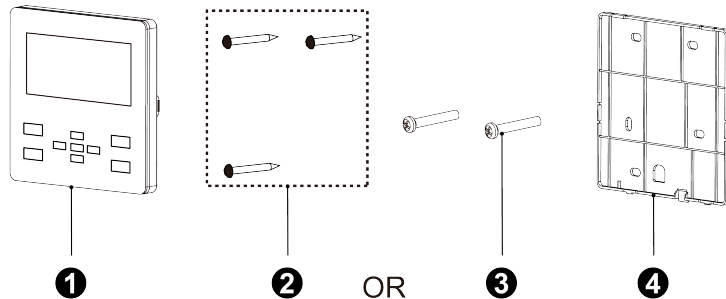
Fig 5.2 Parts of wired controller

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No.	1	2	3	4
Name	Panel of wired controller	Self-tapping Screw ST3.9×25 MA	Screw M4×25	Soleplate of wired controller
Quantity	1	3	2	1

5.1 Installation of Wired Controller

5.1.1 Communication Line Selection
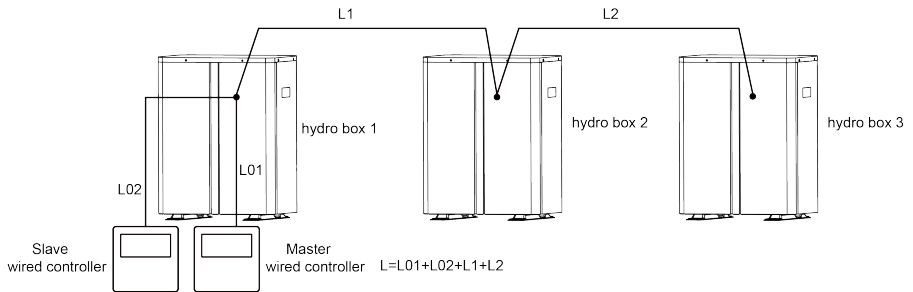
Fig 5.3 Length of communication line

Wire material type	Total length of communication line between indoor unit and wired controller L (m/feet)	Wire size (mm²/AWG)	Material standard	Remarks
Light/Ordinary Polyvinyl chloride sheathed cord. (60227 IEC 52 /60227 IEC 53)	L≤250m (L≤820-1/5feet)	2×0.75mm² ~2×1.25mm² (2×AWG18 ~2×AWG16)	IEC 60227-5: 2007	(1) Total length of communication line can't exceed 250m (820-1/5feet). (2) The cord shall be Circular cord (the cores shall be twisted together). (3) If unit is installed in places with intense magnetic field or strong interference, it is necessary to use shielded wire.

NOTES：

① If the unit is installed at the strong electromagnetic interference place, communication line of the wired controller must use shielding twisted pair.
② Materials of communication line for wired controller must be selected according to this instruction manual strictly.

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5.1.2 Installation Requirements

(1) Prohibit installing the wired controller at wet places.

(2) Prohibit installing the wired controller at direct sunshine places.

(3) Prohibit installing the wired controller at the place near high temperature objects or water-splashing places.

5.1.3 Wiring Requirements

(1) There are four network wiring methods between wired controller and hydro box:
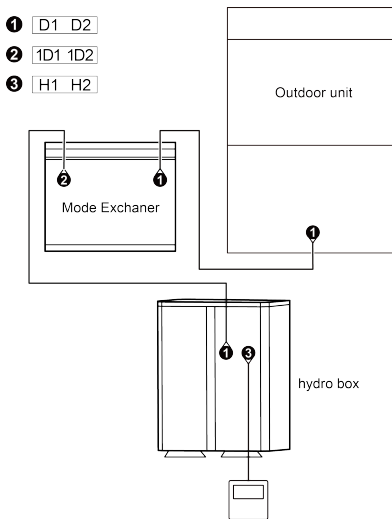
Fig 5.4 One wired controller controls one hydro box
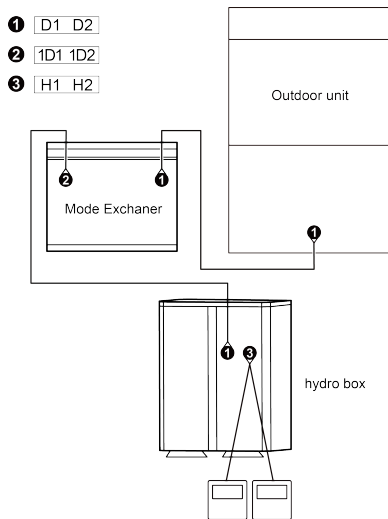
Fig 5.5 Two wired controllers control one hydro box
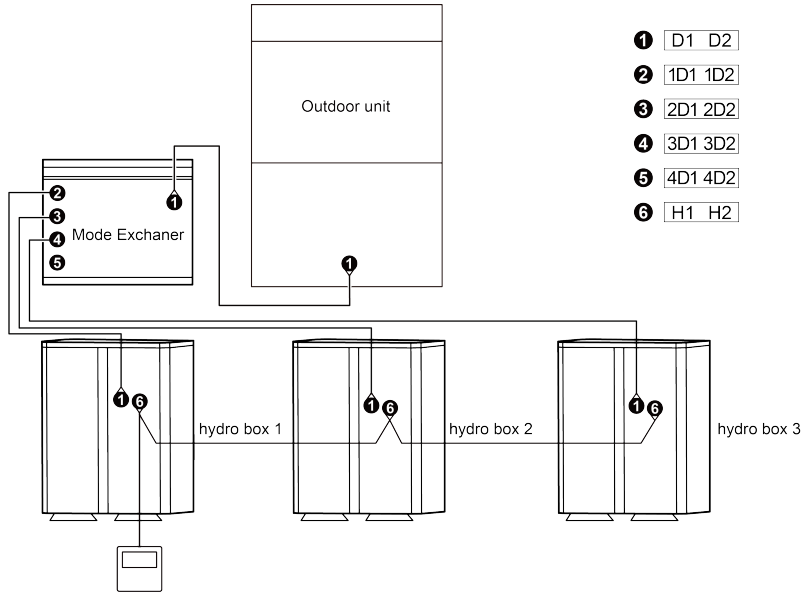
Fig 5.6 One wired controller controls multiple hydro boxes simultaneously

❶ | D1   D2 |
❷ | 1D1 1D2 |
❸ | 2D1 2D2 |
❹ | 3D1 3D2 |
❺ | 4D1 4D2 |
❻ | H1   H2 |

Outdoor unit

Mode Exchaner

hydro box 1   hydro box 2   hydro box 3
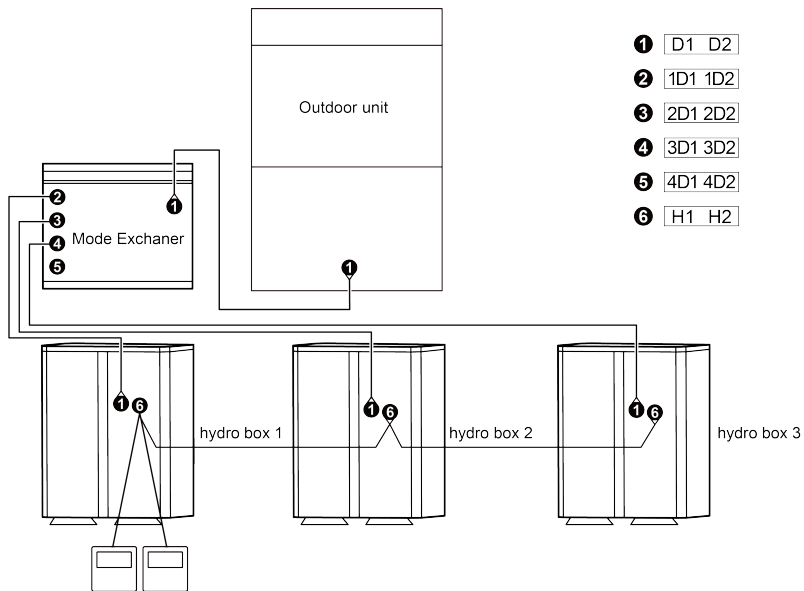
Fig 5.7 Two wired controllers control multiple hydro boxes simultaneously

Wiring instructions:

1) When one wired controller controls multiple hydro boxes simultaneously, the wired controller can connect to any one hydro box, but the connected ones must be either hydro boxes. The total quantity of hydro box controlled by wired controller can't exceed 3 sets, and the connected hydro box must be within the same network.

2) When two wired controllers control one hydro box, the addresses of those two wired controllers should be different. Please refer to 5.2.2 Parameter Setting.

3) When two wired controllers control multiple hydro boxes simultaneously, they can connect to any one hydro box, but the connected ones must be either hydro boxes. The addresses of those two wired controllers should be different. Please refer to 5.2.2 Parameter Setting. The total quantity of hydro box controlled by wired controller can't exceed 3 sets, and the connected hydro box must be within the same network.

4) When one (or two) wired controller(s) control (s) multiple hydro boxes at the same time, the controlled hydro boxes should have the same setting.

5) Network connection of wired controller and hydro box must be according to one of the four wiring methods as shown in Fig 5.4-5.7. As for the connection method shown in Fig 5.5 and 5.7, there should be only one master wired controller (address is 01) and one slave wired controller (address 02). The quantity of wired controller can't exceed two.

5.1.4 Installation
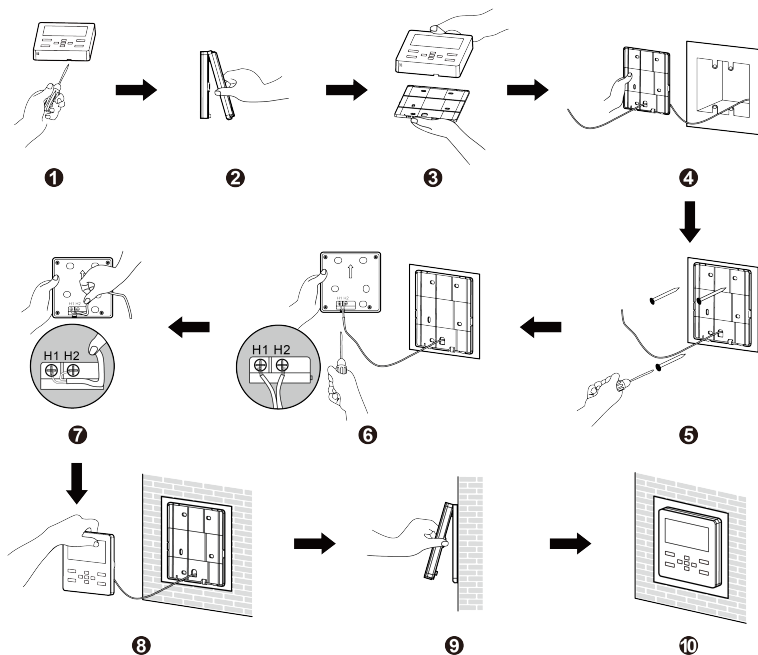
Fig 5.8 Installation diagram for wired controller

Fig. 5.8 is the simple installation process of wired controller, please pay attention to the following items:

(1) Before installation, please cut off the power of hydro box.

(2) Pull out the two-core twisted pair from the installation hole on wall, and then pull this wire through the "⌂" shape hole at the rear side of soleplate of wired controller.

(3) Stick the bottom plate of wired controller on the wall and then use Self-tapping Screw ST3.9×25 MA or Screw M4×25 to fix Soleplate and installation hole on wall together.

(4) Connect two-core twisted pair to H1 and H2 wiring column and then fix the screws.

(5) Tidy up the lines in slot on the back of the panel, and then bundle the front panel of wired controller to its soleplate and the installation is completed.

NOTE: If the wire size of the selected communication line is too large, you can peel some sheath layer of communication wire to satisfy installation requirements.

5.1.5 Disassembly
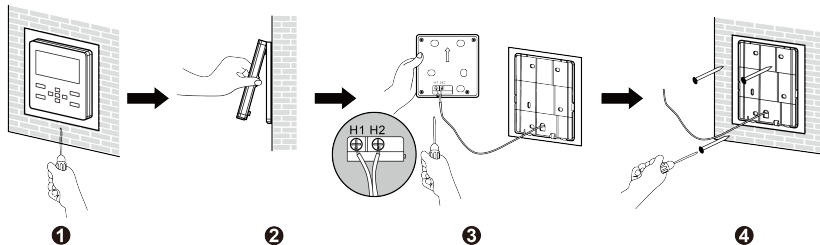
Fig 5.9 Disassembly diagram of wired controller

5.2 Commissioning

5.2.1 Parameter Inquiry

Parameters can be viewed under both ON and OFF status.

Press "MENU/OK" button on homepage to enter menu, then select "View" to enter inquiry interface; in inquiry interface, select "Project View" to enter project inquiry interface, please refer to Fig 5.10:

Project View
➤ User Parameters View
Project Parameters View
View All Hydro Box Project No.
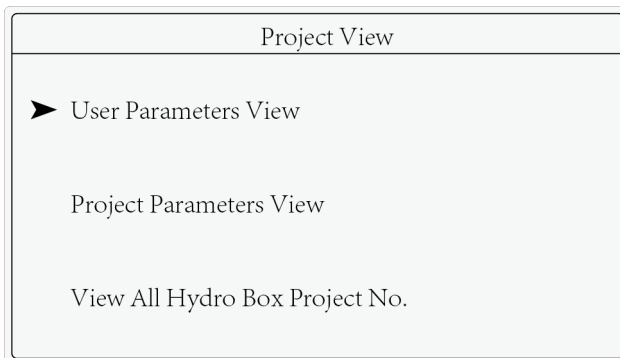
Fig 5.10 Project inquiry interface

(1) View All Hydro Box Project No.

Select "View All Hydro Box Project No." in project inquiry interface to enter the interface as shown as Fig 5.11, user can turn on or turn off the function of viewing all the hydro box project No.

```
┌─────────────────────────────────────────────┐
│        View All Hydro Box Project No.         │
├─────────────────────────────────────────────┤
│                                               │
│                    <ON>                       │
│                                               │
│                                               │
│                                               │
│                                               │
│                                               │
│                                               │
│                                               │
└─────────────────────────────────────────────┘
```
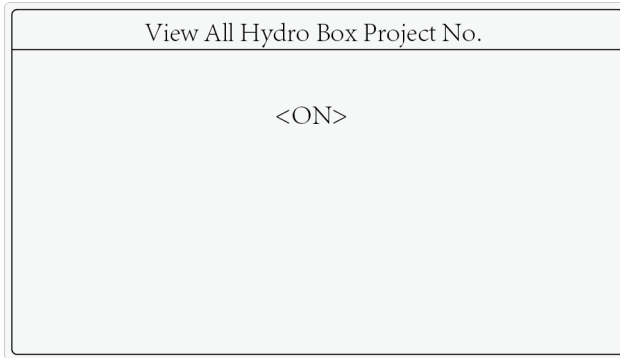
Fig 5.11 View All Hydro Box Project No. interface

After starting "View All Hydro Box Project No.", all wired controllers in the network will display the project No. of the hydro box (when the wired controller controls several hydro boxes, it will display the project No. of hydro box by turns every 3 seconds, and the project No. will be displayed from small to large).

After starting "View All Hydro Box Project No.", you can enter the interface to turn off this function, or press "ON/OFF" button in anyone of the wired controller of the network to cancel project No. display of all hydro boxes.

(2) Parameter inquiry

Parameter inquiry includes "Project Parameters View" and "User Parameters View", project parameters view is used by the engineer in commissioning, the password shall be verified. In project inquiry interface, select "User Parameters View"

to enter user parameters view interface as shown as Fig 5.12. For more parameters, please refer to Table 5.1 "User parameters view list".

Parameters View	1/3
Wired Controller Address:	Master
Online Hydro Boxes and IDUs of CAN1:	1
Number of Hydro Boxes:	1
CAN2 Address:	--

Fig 5.12 Parameters view interface

When inquiring the parameter of hydro box, if there are several hydro boxes, press "Left" or "Right" button to switch them, the interface will display the parameters of corresponding hydro box, as Fig 5.13 is shown.

```
<Box:1>     Hydro Box Parameters View        3/3


   Prior Operation:                         No

   Water Temp. of Water Tank:              25℃
```

Fig 5.13 Hydro box parameters view interface

Table 5.1 User parameters view list

Parameter name	Parameter range	Instruction
Wired controller address	Master(01) Slave(02)	Display the wired controller address
Online hydro boxes and IDUs of CAN1	1-80	Display the total quantity of IDUs and hydro boxes
Number of hydro boxes	1-3	Display the quantity of hydro boxes controlled by the wired controller
CAN2 Address	1-255	Display CAN2 address
ODU Amb Sensor Temp. Query	—	Display outdoor ambient temperature value

Parameter name	Parameter range	Instruction
Prior Operation	Yes or No	If current hydro box is operated preferentially (hydro box parameter, press "Left" or "Right" button to switch hydro box)
Water Temp. of Water Tank	0-100℃	Hot water temperature value of water tank of current hydro box (hydro box parameter, press "Left" or "Right" button to switch hydro box)

NOTE：

If the parameter is invalid value, it displays "--".

5.2.2 Parameter Setting

Parameters can be set under both ON and OFF status.

Press "MENU/OK" button on homepage to enter menu and select "Set" to enter setting interface; in setting interface, select "Project Setting" to enter project setting interface, as Fig 5.14 is shown. Parameter setting includes "User parameters Set" and "Project parameters set", "Project parameters set" is used by the engineer in project setting, password shall be verified. "User parameters Set" is for the user and shall be set under the guidance of professionals, otherwise, the system might not function normally, please refer to Table 5.2 "User parameter setting list". Press "Up" or "Down" button to select parameter, press "MENU/OK" button to enter corresponding parameter setting interface, press "Up" or "Down" button to adjust parameter value and press "MENU/OK" button to complete setting.

Press "Left" or "Right" button for page turning.
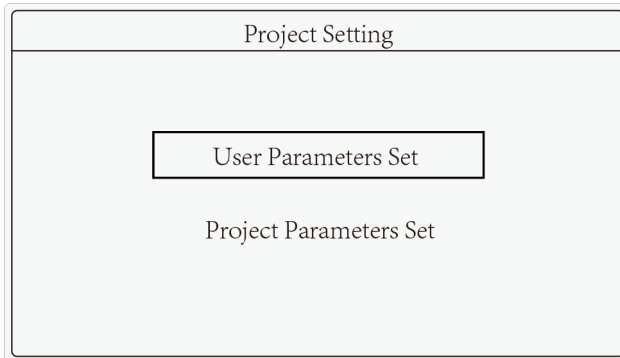
Fig 5.14 Project setting interface

User parameter setting list is as follow:

Table 5.2 User parameter setting list

Parameter name	Parameter range	Default value	Note
Address Setting for Dual Wired Controller	01:Master wired controller 02:Slave wired controller	01	When two wired controllers control a set of (several) hydro box(es) at the same time, the address of the two wired controller shall be different. Apart from setting the address of this wired controller, the slave wired controller (address 02) has no parameter setting function.
Number of hydro box	00:This function is prohibited 01-03:Quantity of hydro box	01	Set corresponding value according to the quantity of the connected hydro box.
Prior Operation	00:Non-priority operation 01:Priority operation	00	When power supply is insufficient, set the operated hydro box preferentially for ON/OFF operation, the other hydro boxes will be off compulsorily.

Parameter name	Parameter range	Default value	Note
Standby keep warm function of water tank	00:Allowed 01:Not allowed	00	—
Standby keep warm function setting of water tank	35-46°C	42°C	—
Sunflower keep warm water temp. setting	35-50°C	40°C	—
Automatic water temp. Correction of hot water	-2-8°C	0°C	—
High-temp sterilization cycle days	0-60	0	When it is 0, high temperature sterilization function is valid for once and will not conduct circulating operation.
Advance startup time of high-temp sterilization	0-3 hours	1	—

Parameter name	Parameter range	Default value	Note
Hot water E-heater setting for normal operation	00:Allowed 01:Not allowed	00	—
Automatic heat recovery is allowed or not	00:Allowed 01:Not allowed	00	—
Automatic heat recovery water temp. setting	35-46℃	42℃	—
Rapid heat mode setting	00:Allowed 01:Not allowed	01	—
Floor heating E-heater setting	00:Allowed 01:Not allowed	00	—
Max. outlet water temp. setting value for floor heating	40-52℃	45℃	—

6 Operation Instructions

6.1 Hot Water and Floor Heating Interface Switchover

Under homepage, press "FLOOR/H-WATER/C-WATER" button, current interface will be switched among hot water and floor heating.

Select "Hot-Water" in the interface mark column, current interface will switch to hot water, as Fig 6.1 is shown.

Select "Floor-Heat" in the interface mark column, current interface will switch to floor heating, as Fig 6.2 is shown.
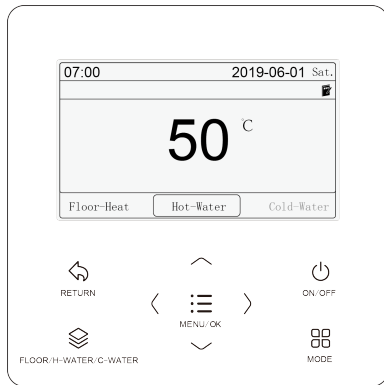
Fig 6.1 Hot water interface   Fig 6.2 Floor heating interface
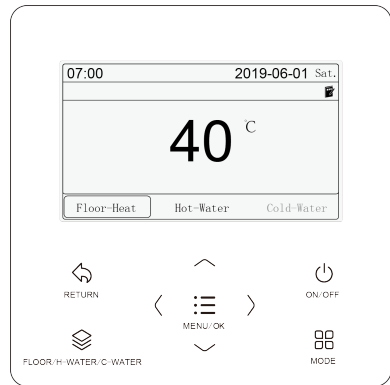
NOTES：

    ①   If hot water or floor heating function is invalid and failed to switch to the corresponding interface, e.g., when the hot water function is invalid, pressing the "FLOOR/H-WATER/C-WATER" button will not switch to the hot water interface.

    ②   Only when hydro box is connected and hot water and floor heating function is valid can you switch the interface according to the above content.

    ③   The cold water function is reserved, and it is temporarily impossible to switch to the cold water interface to set the cold water related function.

6.2 ON/OFF

Under hot water or floor heating interface, press "ON/OFF" button to turn on or turn off the corresponding function, after turning on the function, the character in mark column of the interface will be displayed in black background and white text, e.g., under hot water interface, press "ON/OFF" button to turn on or turn off hot water function.

ON and OFF interface of hot water function is as Fig 6.3 is shown.
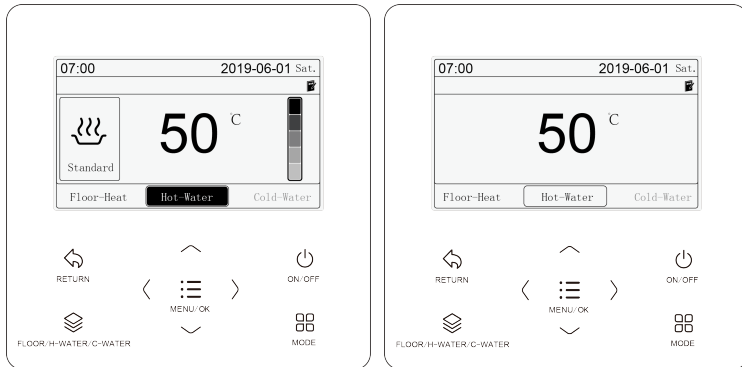
Fig 6.3 ON and OFF interface of hot water function

6.3 Hot Water Mode Setting

Under startup status of hot water function, press "MODE" button in hot water interface, the mode will be switched in the following sequence:
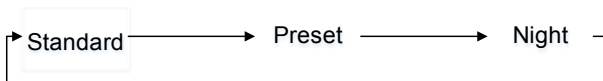
Fig 6.4 Switch under hot water mode

Standard hot water mode: the hydro box will start or stop heating water immediately according to current water temperature.

Preset hot water mode: prestart the unit according to actual water temperature, startup and shutdown of compressor will be decided by actual water temperature and the set water temperature difference. In preset time, heat the water temperature to the set temperature. The hydro box will be off 1~4 hour(s) after the preset time. After setting, the unit will be operated circularly every day.

Night hot water mode: the fixed time to provide hot water is 00:00-06:00. The hydro box will be started then, startup and shutdown of compressor will be decided by actual water temperature and the set water temperature difference. In other time, the hydro box will be under standby status. After setting, the unit will be operated circularly every day.

NOTE：

Floor heating function has standard mode only, "MODE" button is invalid.

6.4 Temperature Setting

Under hot water or floor heating interface and the corresponding function is on, press "Up" or "Down" button to set temperature for corresponding function, eg: When the hot water function is ON, press "Up" or "Down" button in hot water interface, the set hot water temperature will increase or decrease 1℃ each time; long press the button, the temperature will increase or decrease 1℃ continuously.

NOTES:

 ①   Under standard hot water, preset hot water and night hot water mode, the set temperature range is 35℃~the highest water temperature of hot water, the defaulted highest water temperature of hot water is 55℃, this temperature can be adjusted to 55℃~70℃ by professionals.

 ②   Setting range for water temperature of standard hot water, preset hot water and night hot water mode is the same, the set value of water temperature under each mode is independent.

 ③   If "Automatic Hot Water Temp. Setting" function of hot water is valid, water temperature setting can't be adjusted through pressing "Up" or "Down" button.

 ④   Temperature range of floor heating water outlet: 25℃~the highest

water outlet temperature of floor heating, the defaulted highest water outlet temperature of floor heating is 45℃, the temperature can be adjusted between 40℃~52℃by professionals.

⑤ If "Automatic Floor Heating Water Temp. Setting" function of floor heating is valid, floor heating temperature setting can't be adjusted through pressing "Up" or "Down" button.

6.5 Function Setting

Under hot water or floor heating interface and press "MENU/OK" button to enter corresponding function menu, e.g., under hot water interface, press "MENU/OK" button to enter hot water menu, select "Function" in menu to enter hot water function setting interface, as Fig 6.5 is shown.

Function Setting	
O Sun-flower	O Automatic Hot Water Temp. Setting
O High-temp Sterilization◢	O Rapid Water Heating
O Automatic Floor Heating Water Temp. Setting◢	
O Rapid Floor Heating	O Clean
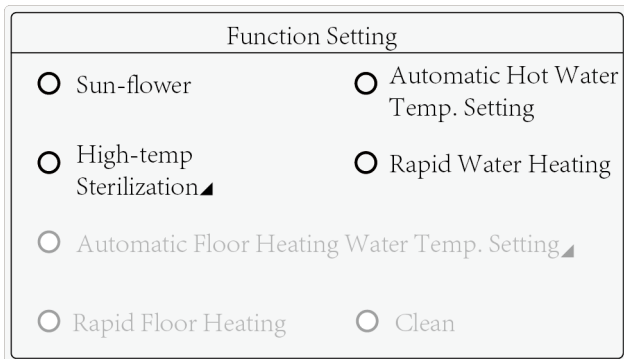
Fig 6.5 Hot water function setting interface

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Under ON/OFF status, the available function for hot water is as follow:

ON/OFF	Function
Standard hot water mode	Sun-flower, automatic hot water temp. setting, high-temp sterilization and rapid water heating
Preset hot water mode	Automatic hot water temp. setting, high-temp sterilization and rapid water heating
Night hot water mode	Automatic hot water temp. setting, high-temp sterilization and rapid water heating
OFF	Clean

Under ON/OFF status, the available function for floor heating is as follow:

ON/OFF	Function
ON	Automatic floor heating water temp. setting and rapid floor heating
OFF	Clean

Switch the function through "Up" or "Down" button, press "MENU/OK" button to start or shut down corresponding function, "◉" means the function has started, "○" means the function has shut down. Press "RETURN" button to save the setting and return to the previous interface. Select the item(High-temp sterilization/Automatic floor heating water temp. setting) with "◢" icon, press "MENU/OK" button will enter corresponding function setting interface.

NOTES:

① If the function is shielded or can't be started due to other reasons, function display will be grey, press "Up" or "Down" button to skip the function setting.

② For rapid water heating, automatic hot water temp. setting and sun-flower function, when switching to hot water mode, if these functions are not available in the switched mode, then the function is invalid; if yes, then you can set or cancel this function is this mode.

6.5.1 Function Introduction

Sun-flower function: find out the highest outdoor temperature in a day through recording historical outdoor data to confirm hot water heating time to reach the purpose of energy conservation;

Automatic hot water temp. setting: hot water temperature will be decided by the main board according to outdoor ambient temperature, it's no need for the user to set it;

Rapid water heating function: under the allowable condition of outdoor unit, start the compressor and electrical heater to speed up water heating;

Rapid floor heating function: under the allowable condition of outdoor unit, start the compressor and electrical heater to speed up heating.

NOTES:

    ①   Rapid water heating function is valid for once, when hydro box has reached heat preservation status, rapid water heating will be canceled automatically for energy conservation.

    ②   Rapid floor heating function is valid for once, when floor heating function of hydro box has reached heat preservation status, rapid floor heating function will be canceled automatically for energy conservation.

    ③   Setting for rapid floor heating should abide by the following conditions, otherwise the setting may fail: 1. If the floor heating is just turned on, the setting should be set after waiting for 1 minute; 2. When water heating and floor heating are activated at the same time, the setting should be done after the water is heated to the set temperature or the water heater is manually turned off; 3. When the floor heating has reached a set temperature, there is no need to set the rapid floor heating function.

6.5.2 Automatic Floor Heating Water Temp. Setting Function

Automatic floor heating water temp. setting function: water outlet temperature of floor heating will be decided by the main board according to outdoor ambient temperature, it's no need for the user to set it.

Enter floor heating function setting interface, press "Up" or "Down" button to select "Automatic Floor Heating Water Temp. Setting", press "MENU/OK" button to enter setting interface, as Fig 6.6 is shown:

```
┌─────────────────────────────────────────────┐
│   Automatic Floor Heating Water Temp. Setting │
│                                               │
│                    ON                         │
│         ┌───────────────────────────┐         │
│         │  ◉ Auto Set Level 1       │         │
│         └───────────────────────────┘         │
│            ○ Auto Set Level 2                 │
│                                               │
│            ○ Auto Set Level 3                 │
│                                               │
└─────────────────────────────────────────────┘
```
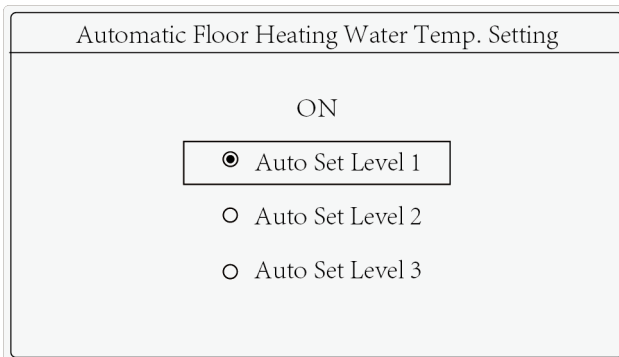
Fig 6.6 Setting interface of automatic floor heating water temp. setting

Select "ON/OFF" and press "MENU/OK" button to start or shut down automatic floor heating water temp. setting function.

Select "Auto set level 1/2/3" and press "MENU/OK" button to set auto setting level for floor heating. The higher the auto setting level is, the higher water outlet temperature will be. The user can select proper auto setting level according to their own usage habits.

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6.5.3 High-temp Sterilization

High-temp sterilization function: the water temperature of the water tank is required to be heated to 65 to 70 ℃ (configurable) in the preset time for high-temperature sterilization.

(1) If the number of high-temp sterilization cycle days is 0, high temperature sterilization setting is valid for once, preset time setting for high temperature sterilization is not available. After setting, high temperature sterilization will be implemented immediately. High temperature sterilization will be shut down after that.

(2) If the number of high-temp sterilization cycle days is over 0, the circulation for high temperature sterilization setting is valid. The user can preset high temperature sterilization, the unit will be operated circularly according to the preset time.

High temperature sterilization setting: enter the hot water function setting interface, press "Up" or "Down" button to select " High-temp sterilization", then press "MENU/OK" button to enter high temperature sterilization setting interface, as Fig 6.7 is shown:

```
┌─────────────────────────────────────────────┐
│            High-temp Sterilization Set        │
├─────────────────────────────────────────────┤
│                                               │
│                   ▓ OFF ▓                      │
│                                               │
│                                               │
│        Water Temp. Set for Sterilization:65°C  │
│                                               │
│                                               │
│           Preset Time Set for High-temp       │
│                  Sterilization:--:--          │
│                                               │
└─────────────────────────────────────────────┘
```
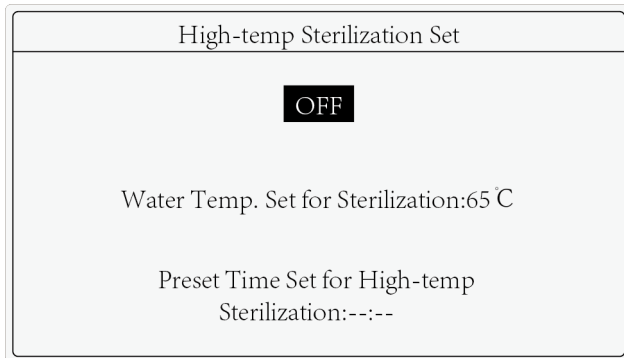
Fig 6.7 Setting interface of high temperature sterilization

Select "ON/OFF" and press "MENU/OK" button to start or shut down high temperature sterilization function.

Select "Water temp. set for high-temp sterilization", press "MENU/OK" button to enter the setting interface, press "Up" or "Down" button to adjust the sterilization temperature, press "MENU/OK" button to save setting and return to the previous page, or press "RETURN" button to cancel setting and return to the previous page.

Select "Preset time set for high-temp sterilization" to enter the setting interface, press "Up" or "Down" button to adjust time value, press "Left" or "Right" button to switch time unit, press "MENU/OK" button to save setting and return to the previous page, or press "RETURN" button to cancel setting and return to the previous page.

NOTES:

      ①   Preset time for high temperature sterilization is valid acquiescently, time area will display "--:--", if high-temp sterilization cycle days is over 0 and it is the first time to start high temperature sterilization, it's necessary to set preset time for high temperature sterilization.

      ②   High-temp sterilization cycle days can be revised by the professionals. Defaulted ex-factory setting for high-temp sterilization cycle days is 0.

6.5.4 Preset Time Setting for Preset Hot Water Mode

Under startup status of hot water function, press "MODE" button in hot water interface to switch to preset mode, at this time, preset time will blink, press "Up" or "Down" button to adjust time value, press "Left" or "Right" button to switch time unit, press "MENU/OK" button to complete preset time setting, or press "RETURN" button to exit time setting, the operation will not be saved.

NOTE:

Switch the unit to preset hot water mode, it will enter preset time setting status automatically. Under preset time setting status, it will exit the status if no operation in 20 seconds, if the user need to re-enter preset time setting status, press "MODE" button to switch to preset mode again. Preset time is invalid acquiescently, for the first time to use preset mode, effective preset time shall be set, otherwise, preset mode setting is invalid, the wired controller will return to standard hot water mode automatically.

6.5.5 Clean Function Setting

Start the water pump, which is used for engineering evacuation, water line cleaning, etc.

Enter function setting interface to start cleaning when hot water and floor heating function is off. After starting clean function, "Clean" icon will be on, during cleaning process, "Clean" icon will blink.

NOTE:

Clean and high-temp sterilization is mutually exclusive, can't start the two functions at the same time.

When clean function has started, hot water and floor heating function can't turn on until cleaning is finished and clean function is off.

6.5.6 Child Lock

Simultaneously pressing the "Up" and "Down" buttons for 5s when it is on or off with no fault, the wired controller will enter child lock state, and the LCD display will show the icon of "🔒"; Press "Up" and "Down" button for 5s again to exit child lock state.

The other buttons will not response in the child lock state.

6.6 Schedule Function

Under hot water or floor heating interface, press "MENU/OK" button to enter menu, then select "Schedule" to enter schedule setting interface of corresponding function, e.g., under hot water interface, press "MENU/OK" button to enter menu and select "Schedule" to enter schedule interface of hot water function, as Fig 6.8 is shown. "◉" displayed on the left of schedule item means schedule function has enabled, "○" means schedule function has disabled.

```
                    Schedule-Hot Water

      ◉  Schedule1 :◢ 12:30 On - 8:20 Off

      ○  Schedule2 :◢

      ○  Schedule3 :◢

      ◉  General Timer :◢ Off after 1.0 hrs
```
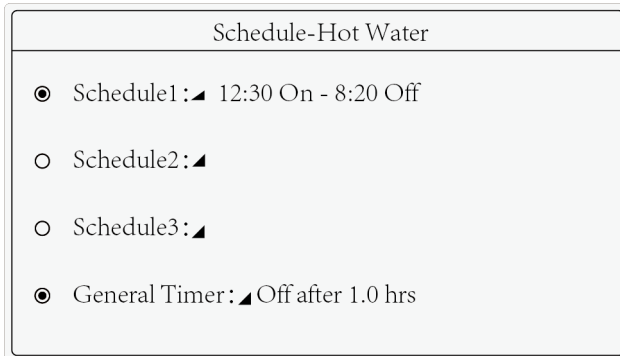
Fig 6.8 Schedule interface for hot water

In schedule interface, press "Up" or "Down" button to switch item, select "Schedule 1", "Schedule 2" or "Schedule 3" to enter schedule setting interface, as Fig 6.9 is shown (take schedule 1 as an example).

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Schedule1	
Enable	
◉ 08:00On◢	Standard◢
○ 17:00Off◢	45°C◢
◉ Repeat：◢ Every day	
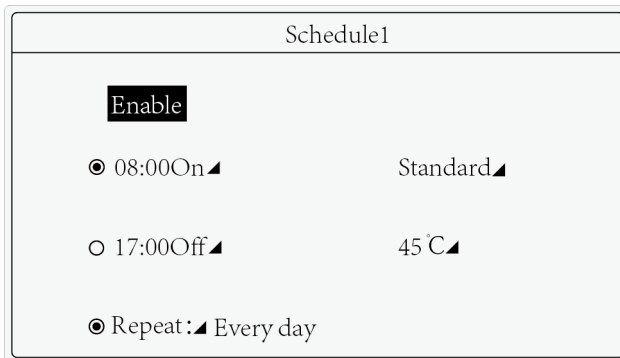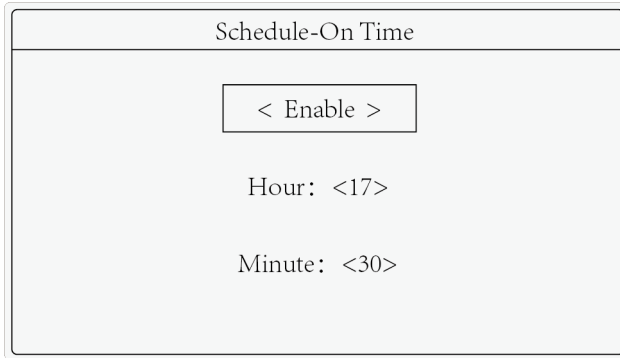
Fig 6.9 Schedule 1 setting interface

In schedule 1 interface, switch item through "Up" or "Down" button, when choosing the first item, press "MENU/OK" button to start or shut down schedule 1; when choosing the other items, press "MENU/OK" button to enter corresponding setting interface.

After entering mode or temperature setting interface, the user can set the mode or temperature for timer startup;

Set On/Off time only if timer on/off is needed. If both timer on/off is needed at the same time, set On/Off time at the same time. On time setting interface is as Fig 6.10 is shown. In On/Off time setting interface, switch items through "Up" or "Down" button and press "Left" or "Right" button to switch On/Off time or adjust the time, press "MENU/OK" button to save setting and return to the previous page.

```
┌─────────────────────────────────────────┐
│           Schedule-On Time                │
│                                           │
│         ┌─────────────────┐               │
│         │   < Enable >     │               │
│         └─────────────────┘               │
│                                           │
│           Hour: <17>                      │
│                                           │
│           Minute: <30>                    │
│                                           │
└─────────────────────────────────────────┘
```

Fig 6.10 Setting interface for On time

In schedule 1 interface, select "Repeat" to enter the setting interface as Fig 6.11 is shown to set the effective time for repeated timer, switch items through "Up" or "Down" button and press "MENU/OK" button to confirm/cancel corresponding item, then press "RETURN" button to save setting and return to the previous page.

Schedule-Repeat	
O Every day	O Monday
O Tuesday	O Wednesday
O Thursday	O Friday
O Saturday	O Sunday
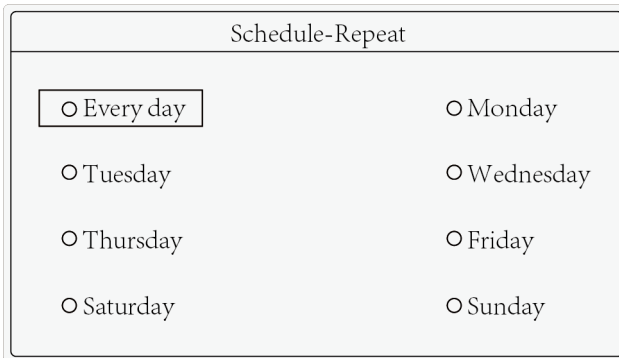
Fig 6.11 Schedule repeat setting interface

In schedule interface, switch items through "Up" or "Down" button and select "General timer" to enter timer countdown setting interface, as Fig 6.12 is shown. Under ON status, you can set countdown time for shutdown. Under OFF status, you can set countdown time for startup.

```
┌─────────────────────────────────────────────┐
│                General Timer                  │
├─────────────────────────────────────────────┤
│                                               │
│         ┌─────────────────────────┐          │
│         │       < Enable >        │          │
│         └─────────────────────────┘          │
│                                               │
│           < 1.5 >hrs later Off                │
│                                               │
│                                               │
│                                               │
└─────────────────────────────────────────────┘
```
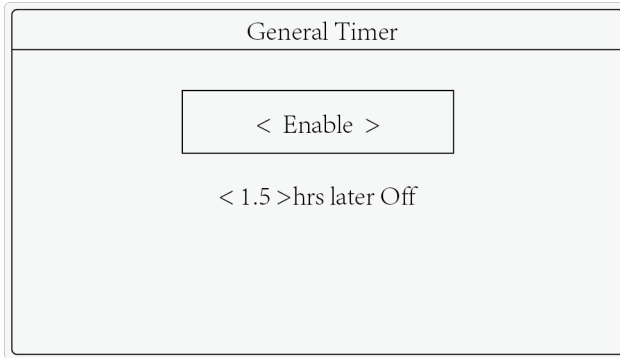
Fig 6.12 General timer setting interface

Switch items through "Up" or "Down" button and press "Left" or "Right" button to switch On/Off time or adjust the time, then press "MENU/OK" button to save setting and return to the previous page.

NOTES:

① To ensure time accuracy, before setting timer, please check if the system time is the current date and time first, if it is not correct, please reset date and time in "Date&Time" setting interface.

② For floor heating function, only standard mode is available, so timer on mode is not settable.

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6.7 Hotline

In the view interface, select "Hotline" to enter into inquiry page of service hotline, Select "Local Aftersales Tel." to enter into the viewing and setting interface of local after-sales telephone number, as shown below:

```
┌─────────────────────────────────────────┐
│            Local Aftersales Tel           │
│                                           │
│                                           │
│   Tel 1: 1234567890          Clear        │
│                                           │
│   Tel 2: Set First                        │
│                                           │
│                                           │
│                                           │
└─────────────────────────────────────────┘
```

If local after-sales telephone is not set, telephone number will not be displayed; if it is set, telephone number will be displayed. Select "Please set" or telephone number, press "MENU/OK" button to enter the next interface to set telephone number.

After setting telephone number, select "Clear" and press "MENU/OK" button to clear the corresponding telephone number.

NOTE:

In local after-sales telephone interface, you can set two telephone numbers which can let user to find the number quickly and contact the local after-sales service dealer for help.

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6.8 Language Setting

In setting interface, select "Language" to enter language setting interface, Chinese or English is available.

6.9 Voice Setting

In setting interface, select "Voice" to enter voice setting interface, the voice of button of wired controller can be turned on or turned off.

6.10 Date and Time Setting

In setting interface, select "Date&Time" to enter date and time setting interface to set date and time.

6.11 Remote Shielding Function

Remote shielding function: long-distance monitoring or centralized controller can shield the button operation of wired controller, so the operation is invalid, thus realizing remote control function.

When remote control or central controller is conducting remote shielding for the wired controller, "⑨" icon will be displayed. When the user is conducting button operation for the wired controller, "⑨" icon will blink.

7 Error Display

When errors occur, temperature display area of wired controller will display error code; when several errors occur at the same time, error code will be displayed circularly.

NOTE: when error occur, please turn off the unit and ask the professionals for maintenance.

Fig 7.1 is the error interface when the quantity of group control hydro box setting error.
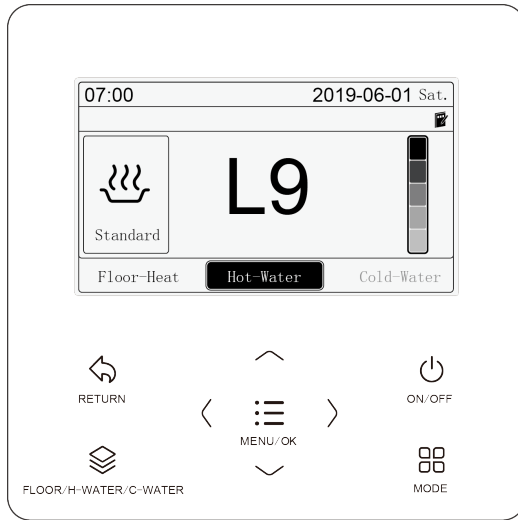
Fig 7.1 Quantity of group control hydro box setting error

7.1 ODU Error Code Table

Error Code	Content	Error Code	Content	Error Code	Content
E0	Outdoor unit error	FH	Compressor 1 current sensor error	b1	Outdoor ambient temperature sensor error

Error Code	Content	Error Code	Content	Error Code	Content
E1	High pressure protection	FC	Compressor 2 current sensor error	b2	Defrosting temperature sensor 1 error
E2	Discharge low temperature protection	FL	Compressor 3 current sensor error	b3	Defrosting temperature sensor 2 error
E3	Low pressure protection	FE	Compressor 4 current sensor error	b4	Subcooler liquid-out temperature sensor error
E4	Excess discharge temperature protection of compressor	FF	Compressor 5 current sensor error	b5	Subcooler gas-out temperature sensor error
EC	Compressor 1 discharge temperature sensor detachment protection	FJ	Compressor 6 current sensor error	b6	Gas-liquid separator inlet temperature sensor error

Error Code	Content	Error Code	Content	Error Code	Content
EL	Compressor 2 discharge temperature sensor detachment protection	FU	Compressor 1 top temperature sensor error	b7	Gas-liquid separator outlet temperature sensor error
EE	Compressor 3 discharge temperature sensor detachment protection	Fb	Compressor 2 top temperature sensor error	b8	Outdoor humidity sensor error
EF	Compressor 4 discharge temperature sensor detachment protection	J1	Compressor 1 over-current protection	b9	Heat exchanger gas-out temperature sensor error
EJ	Compressor 5 discharge temperature sensor detachment protection	J2	Compressor 2 over-current protection	bA	Oil-return temperature sensor error

Error Code	Content	Error Code	Content	Error Code	Content
EP	Compressor 6 discharge temperature sensor detachment protection	J3	Compressor 3 over-current protection	bH	System clock malfunction
F0	Bad performance of the outdoor mainboard	J4	Compressor 4 over-current protection	bC	Compressor 1 top temperature sensor detachment protection
F1	High pressure sensor error	J5	Compressor 5 over-current protection	bL	Compressor 2 top temperature sensor detachment protection
F3	Low pressure sensor error	J6	Compressor 6 over-current protection	P0	Compressor drive board error
F5	Compressor 1 discharge temperature sensor error	J7	4-way valve blow-by protection	P1	Compressor drive board malfunction

Error Code	Content	Error Code	Content	Error Code	Content
F6	Compressor 2 discharge temperature sensor error	J8	System pressure over-ratio protection	P2	Protection of compressor drive board power supply
F7	Compressor 3 discharge temperature sensor error	J9	System pressure under-ratio protection	P3	Protection of compressor drive board module reset
F8	Compressor 4 discharge temperature sensor error	JA	Protection of abnormal pressure	H0	Error of fan drive board
F9	Compressor 5 discharge temperature sensor error	JC	Protection of water flow switch	H1	Malfunction of fan drive board
FA	Compressor 6 discharge temperature sensor error	JL	Protection of low high-pressure	H2	Protection of fan drive board power supply

7.2 Hydro Box Error Code Table

Error Code	Content	Error Code	Content	Error Code	Content
L0	Indoor unit error	LL	Error of water flow switch	dA	Indoor unit hardware address error
L4	Wired controller power supply error	LE	Abnormal rotate speed of EC DC water pump	dH	Wired controller PC-Board error
L5	Anti-frosting protection	LF	Error of floor heating shunt valve setting	dF	Upstream water temperature sensor error
L6	Mode conflict	d1	Indoor unit PC-Board error	dJ	Error of returning water temperature sensor
L8	Power insufficient protection	d2	Downstream water temperature sensor error	dP	Error of inlet water temperature sensor of generator
L9	Quantity of group control water tank or hot water generator setting error	d4	Inlet pipe temperature sensor error	dU	Error of outlet water temperature sensor of generator

Error Code	Content	Error Code	Content	Error Code	Content
LA	Water tank or hot water generator incompatibility error	d6	Outlet pipe temperature sensor error	db	Special code: field debugging code

7.3 Table of Debugging Codes

Error Code	Content	Error Code	Content	Error Code	Content
U2	Outdoor unit capacity code/jumper cap setting error	UE	Refrigerant charging is ineffective.	CH	Rated capacity is too high.
U3	Phase sequence protection of power supply	UL	Emergency operation DIP switch setting of the compressor is wrong.	CL	Rated capacity is too low.
U4	Protection of lack of refrigerant	C0	Communication between indoor unit and outdoor unit and the communication between indoor unit and wired controller have malfunction.	CF	Error of multiple master indoor unit

Error Code	Content	Error Code	Content	Error Code	Content
U5	Wrong address of compressor drive board	C2	Communication error between master control and inverter compressor drive	CJ	System addresses is incompatible.
U6	Valve abnormal alarm	C3	Communication error between master control and inverter fan motor drive	CP	Error of multiple master wired controller
U8	Indoor unit tube malfunction	C4	Error of lack of indoor unit	CU	Communication error between indoor unit and remote receiver
U9	Outdoor unit tube malfunction	C5	Alarm of indoor unit project number collision	Cb	Outflow of units IP address
UC	Master indoor unit is successfully set.	C6	Alarm of wrong number of outdoor unit	—	—

7.4 Table of Status Codes

Error Code	Content	Error Code	Content
A0	Unit is waiting for debugging	A8	Vacuum-pumping mode
A1	Check the compressor operation parameters.	AJ	Filter clean reminder
A2	After-sales refrigerant reclaim	AU	Remote urgent stop
A3	Defrosting	Ab	Emergency stop
A5	Online testing	Ad	Operation restriction