AC Pro H-Series 18-48K User Manual

Models
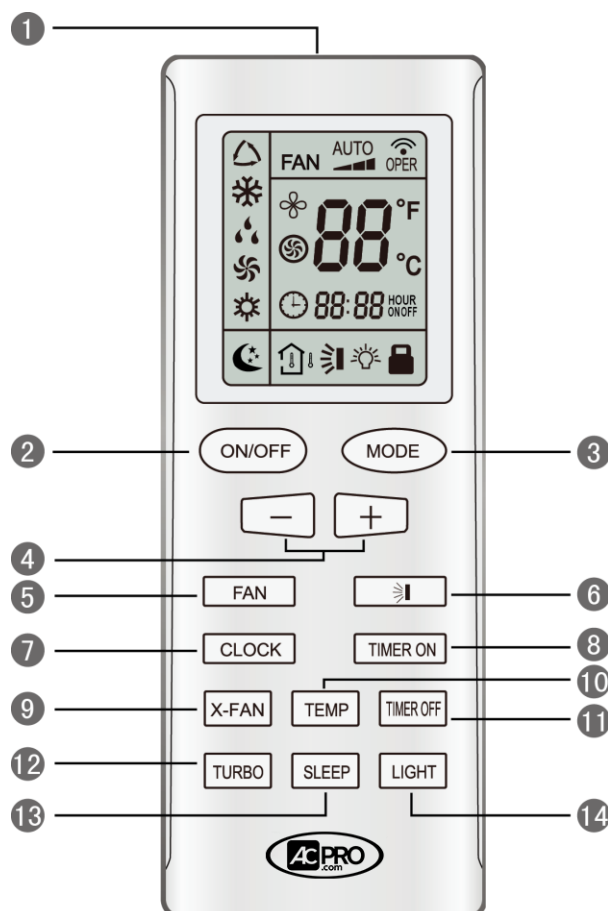
AUHD18ND3F1O	/	AFH18D3F3I
AUHD24ND3F1O	/	AFH24D3F3I
AUHD30ND3F1O	/	AFH30D3F3I
AUHD36ND3F1O	/	AFH36D3F3I
AUHD42ND3F1O	/	AFH42D3F3I
AUHD48ND3F1O	/	AFH48D3F3I

(Refrigerant R410A)
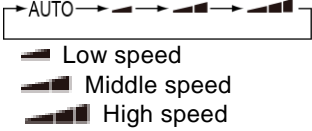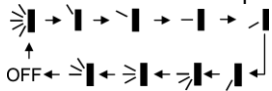
1 WIRELESS REMOTE CONTROLLER

1.1 Operation and Display View

Operation instruction of wireless remote controller

No.	Name	Function Description
❶	Signal transmitter	● Signal transmitter
❷	ON/OFF button	● Press this button and the unit will be turned on; press it once more, and the unit will be turned off. When turning off the unit, the Sleep function will be canceled, but the presetting time is still remained.
❸	MODE button	● By pressing this button, Auto, Cool, Dry, Fan, Heat mode can be selected circularly. Auto mode is default after power on. Under the Auto mode, the setting temperature will not be displayed; Under the Heat mode, the initial value is 28°C (82°F);Under other modes, the initial value is 25°C(77°F). ⌂ AUTO; ❄ COOL; 💧 DRY; ♣ FAN; ☼ HEAT (only for cooling and heating unit)
❹	- button	● Preset temperature can be decreased by pressing this button. Pressing and holding this button for more than 2 seconds can make the temperature changed quickly until release this button and then transmit this order. The temperature adjustment is unavailable under the Auto mode, but the order can be sent by pressing this button. Centigrade setting range: 16-30; Fahrenheit scale setting range 61-86.

|		
	+ button	● Preset temperature can be increased by pressing this button. Pressing and holding this button for more than 2 seconds can make the temperature changed quickly until release the button and then transmit this order. The temperature adjustment is unavailable under the Auto mode, but the order can be sent by pressing this button. Centigrade setting range: 16-30; Fahrenheit scale setting range 61-86.

⑤	FAN button	● By pressing this button, Auto, Low, Middle, High speed can be circularly selected. After power on, Auto fan speed is default.
		
		┌─AUTO─→ ▬ → ▬◖ → ▬◖◗ ┐
		
		  ▬ Low speed
		  ▬◖ Middle speed
		  ▬◖◗ High speed
		
		Note: Under the DRY mode, the fan will be kept running at the low speed and the fan speed isn't adjustable.

⑥	SWING UP/DOWN button	● Press this button to set up the swing angle, which circularly changes as below: ≶▮ → `▮ → `▮ → ─▮ → ⌐▮ ↑ OFF ← ≶▮ ← ≷▮ ← ⌐▮ ← ▮ ● When the guide louver starts to swing up and down, if SWING functions is canceled, the air guide louver will stop and remains at the current position. ● ≶▮ indicates the guide louver swings up and down among those five directions.(Simplified SWING function applicable for some Fan Coil Units: When the wireless remote controller is energized initially with the unit under the OFF status, it should be set by pressing the + button and the SWING button simultaneously, with the symbol ≶▮ blinking twice. Then, after the unit is turned on, this function can be activated by pressing the SWING button, with the displayed symbol ≶▮ indicating swing function is on and without this displayed symbol indicating swing function is off.)
⑦	CLOCK button	● By pressing this button, the clock is allowed to be set, with ⊕ blinking, and then press the +/- button to adjust the clock within 5 seconds. If the +/-button is pressed down constantly for more than 2 seconds, the clock setting will be increased or decreased 10 minutes every 0.5 seconds. After that, another press on the CLOCK button accepts the setting. 12:00 is the default, when the wireless remote controller is energized.
⑧	TIMER ON button	● When TIMER ON is activated, ON will blink while the symbol ⊕ will disappear. Within 5 seconds it is allowed to set the ON time by pressing the +/- button. Each press will make the time increase or decrease one minute. Besides, the time can also be set by pressing the +/- button constantly. that is, in the early 2.5 seconds, the time will increase/decrease quickly per single minute, and in the late 2.5, the time will increase/decrease per ten minutes. After the desired time value is set, press TIENE ON again to conform the setting within five seconds. After that, another press on TIMER ON will cancel the setting. Prior to this setting, the clock shall be set to the actual time.
⑨	X-FAN button	● Pressing this button can activate or deactivate the X-FAN function. In Cool or Dry mode, by pressing this button, if "⚘" is displayed, it indicates the X-FAN function is activated. By repressing this button, if "⚘" disappears, it indicates the X-FAN function is deactivated. After energization, X-FAN OFF is defaulted. If the unit is turned off, X-FAN can be deactivated but can't be activated.
⑩	TEMP button	● By pressing this button it is allowed to select displaying the indoor setting temperature or the indoor ambient temperature. ● Indoor setting temperature is default after the indoor unit is energized initially. ● By pressing the TEMP button, when the temperature symbol ⌂ is displayed, the indoor displayer will show the indoor setting temperature; when ⌂ is displayed, it will show the indoor ambient temperature; when ⌂ is invalidation, If current displays indoor ambient temperature, if received the other remote control signal, it will display presetting temperature, 5s later, will back to display the ambient temperature. (This function is applicable to partial of models)
⑪	TIMER OFF button	● By pressing this button it is available to go to the TIMER OFF setting state with the same setting method as that of the TIMER ON, in which case the OFF symbol blinks.

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⑫	TURBO button	● In the Cool or Heat mode, pressing this button can activate or deactivate the TURBO function. When the TURBO function is activated, its symbol ⑤ will be displayed; when the running mode or the fan speed is changed, this function will be canceled automatically.(This function is applicable to partial of models).
⑬	SLEEP button	● By pressing this button, Sleep On and Sleep Off can be selected. After powered on, Sleep Off is defaulted. Once the unit is turned off, the Sleep function is canceled. When Sleep is set to On, the symbol of SLEEP ☾ will display. Under the Fan and Auto modes, this function is not available.
⑭	LIGHT button	● Press this button to select LIGHT on or off in the displayer. When the LIGHT is set to on, the icon ☀ will be displayed and the indicating light in the displayer will be on. When the LIGHT is set to off, the icon ☀ will be disappeared and the indicating light in the displayer will be off.

2 WIRED CONTROLLER

2.1 Display View
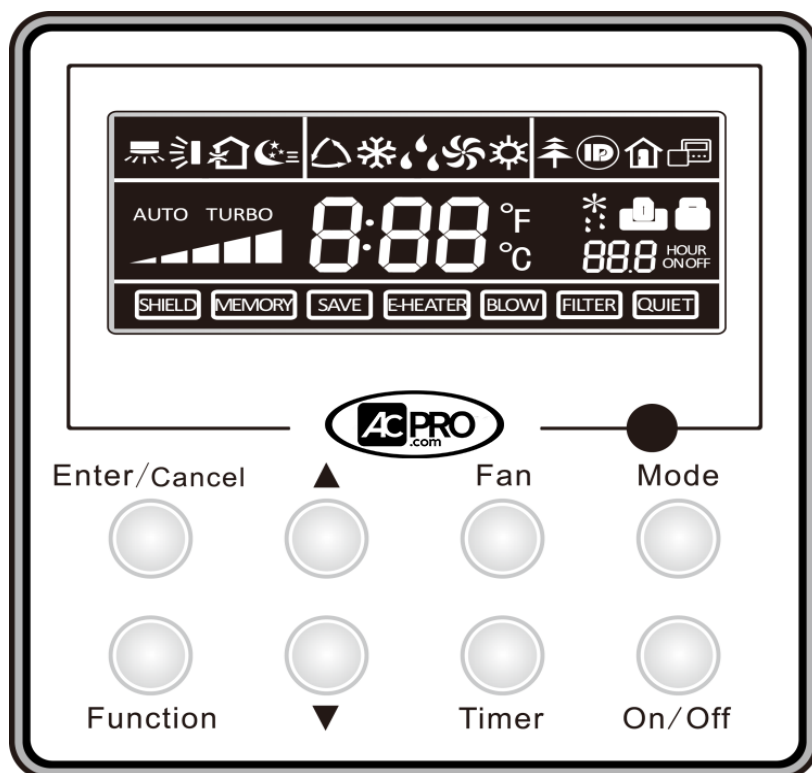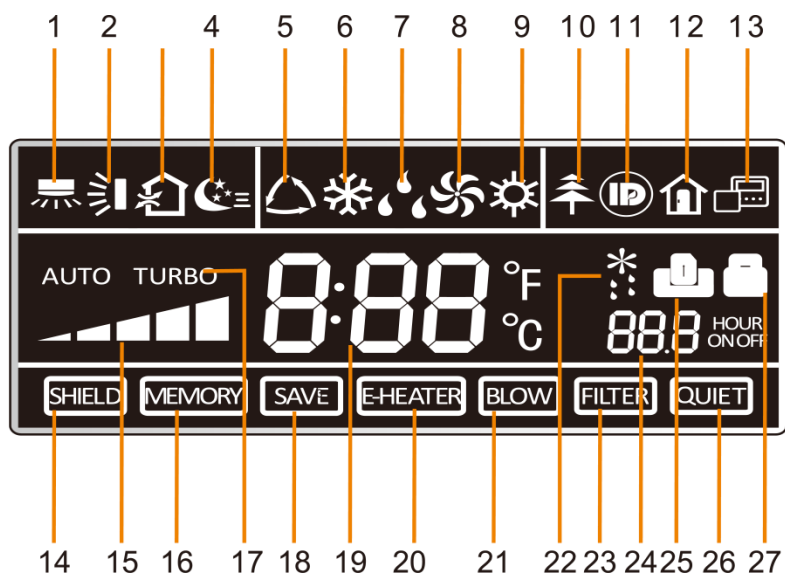
LCD display of wired controller

Instruction to LCD Display

No.	Icons	Introduction
1		Left and right swing function
2		Up and down swing function
3		Air exchange function
4		Sleep function
5		Auto mode
6		COOL mode
7		DRY mode
8		FAN mode
9		HEAT mode
10		Health function
11		I-Demand function
12		Vacation function
13		Status display of master and slave wired controller
14	SHIELD	Shield function The button operation, temperature setting, "On/Off" operation, "Mode" setting, and "Save" setting are disabled.
15	AUTO TURBO	Fan speed
16	MEMORY	Memory function The unit will resume the original setting state after power recovery.
17	TURBO	Turbo function
18	SAVE	Energy-saving function

19	8:88 °F°C	Ambient/setting temperature
20	E-HEATER	Electric heater
21	BLOW	Blow function
22	❄	Defrosting function
23	FILTER	Filter cleaning
24	888 HOUR ON OFF	Timer Setting
25	⬆	Keycard control / Detected status sensed by human body
26	QUIET	Quiet function
27	🔒	Lock function

2.2 Operation View

2.2.1 Silk Screen of Buttons
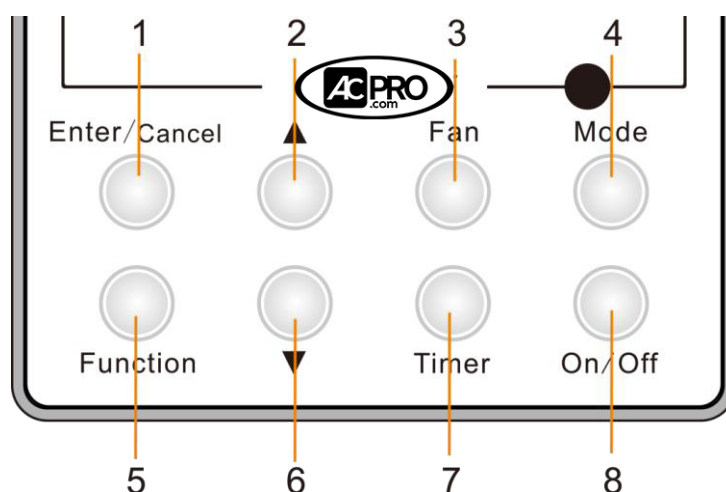
Figure 2-3-3 Silk screen of buttons

2.3.2 Instruction to Function of Buttons

Table 2-3-2 Instruction to buttons of wired controller

No.	Description	Functions
1	Enter/Cancel	(1)Function selection and canceling; (2)Press it for 5s to view the ambient temperature; press Mode button to select viewing outdoor ambient temperature or indoor ambient temperature.
2	▲	(1) Running temperature setting range of indoor unit: 16-30℃(61-86℉); (2) Timer setting range: 0.5-24hr; (3) Setting of air function level; (4) Setting of energy-saving temperature; (5) Setting of cleaning class.
6	▼	
3	Fan	Setting of high/medium high/medium/medium low/low/auto fan speed.

4	Mode	Setting of auto/cooling/heating/fan/dry mode of indoor unit.
5	Function	Switch over among these functions of swing/air/sleep/health/I-Demand/out/turbo/save/e-heater/X-fan/clean/quiet.
7	Timer	Timer setting.
8	On/Off	Turn on/off indoor unit.
4 Mode and 2 ▲	Memory function	Press Mode and ▲ buttons at the same time for 5s under off state of the unit to enter/cancel memory function (If memory function is set, indoor unit will resume original setting state after power failure and then power recovery. If not, indoor unit is defaulted to be off after power recovery. Ex-factory setting of memory function is on).
2 ▲ and 6 ▼	Lock	Upon startup of the unit without malfunction or under off state of the unit, press ▲ and ▼ buttons at the same time for 5s to enter lock state. In this case, any other buttons won't respond when pressing. Repress ▲ and ▼ buttons for 5s to quit lock state.
4 Mode and 5 Function	Enquiry and setting of address of wired controller	Under off state of the unit, press Mode and Function buttons at the same time for 5s to set the address. (More details please refer to project debugging)
5 Function and 7 Timer	Setting of project parameters (More details please refer to the Notes)	Under off state of the unit, press Function and Timer buttons at the same time for 5s to go to the debugging menu. Press Mode button to adjust the setting items and press ▲ or ▼ buttons to set the actual value.
4 Mode and 6 ▼	Switch between Fahrenheit and Centigrade	Under off state of the unit, press Mode and ▼ buttons at the same time for 5s to switch between Fahrenheit and Centigrade.
5 Function and 6 ▼	Viewing historical malfunction	Continuously press Function and ▼ buttons for 5s to view historical malfunction. Then press ▲ and ▼ buttons to adjust displayed contents. The timer displaying position displays the sequence of malfunction and the detailed error code. The 5th displayed malfunction is the last malfunction.
1 Enter/Cancel and 4 Mode	Setting of master and slave wired controller	Under off state of the unit, press Enter/Cancel and Mode buttons at the same time for 5s to set master and slave wired controller. Press ▲ or ▼ button to adjust. (More details please refer to project debugging)

Notes:

The following functions can be set through Function and Timer buttons: setting of ambient temperature sensor, selecting three speeds in high speed and three speeds in low speed of indoor fan motor, display setting of freeze protection error code, setting of cold air prevention and hot air hot prevention function, setting of refrigerant-lacking protection function, selecting of blowing residual heat of indoor unit, selecting of compressor electric heater mode, selecting of low-power consumption mode, selecting door control function, selecting human sensitive function, long-distance monitoring, temperature compensation value at the air return port.

2.2.3 Setting of Wired Controller's Address
2.2.3.1 Enquiry and Setting of Wired Controller's Address

Under off state of the unit, press Function and Mode buttons at the same time for 5s to enter setting interface of wired controller's address. In this case, LCD displays address number. Then press▲ or ▼ button to adjust address and then press Enter/ Cancel button to confirm. The address setting is related to the setting of Debugging Function 4.9.10. When the selection in 4.9.10 is 00, address of centralized controller is to be set and the address setting range is 01~16; when the selection in 4.9.10 is 01, address of long-distance monitor is to be set and the address setting range is 01~255.

Enquiry and setting of wired controller's address is shown as Figure 2-3-4 below:
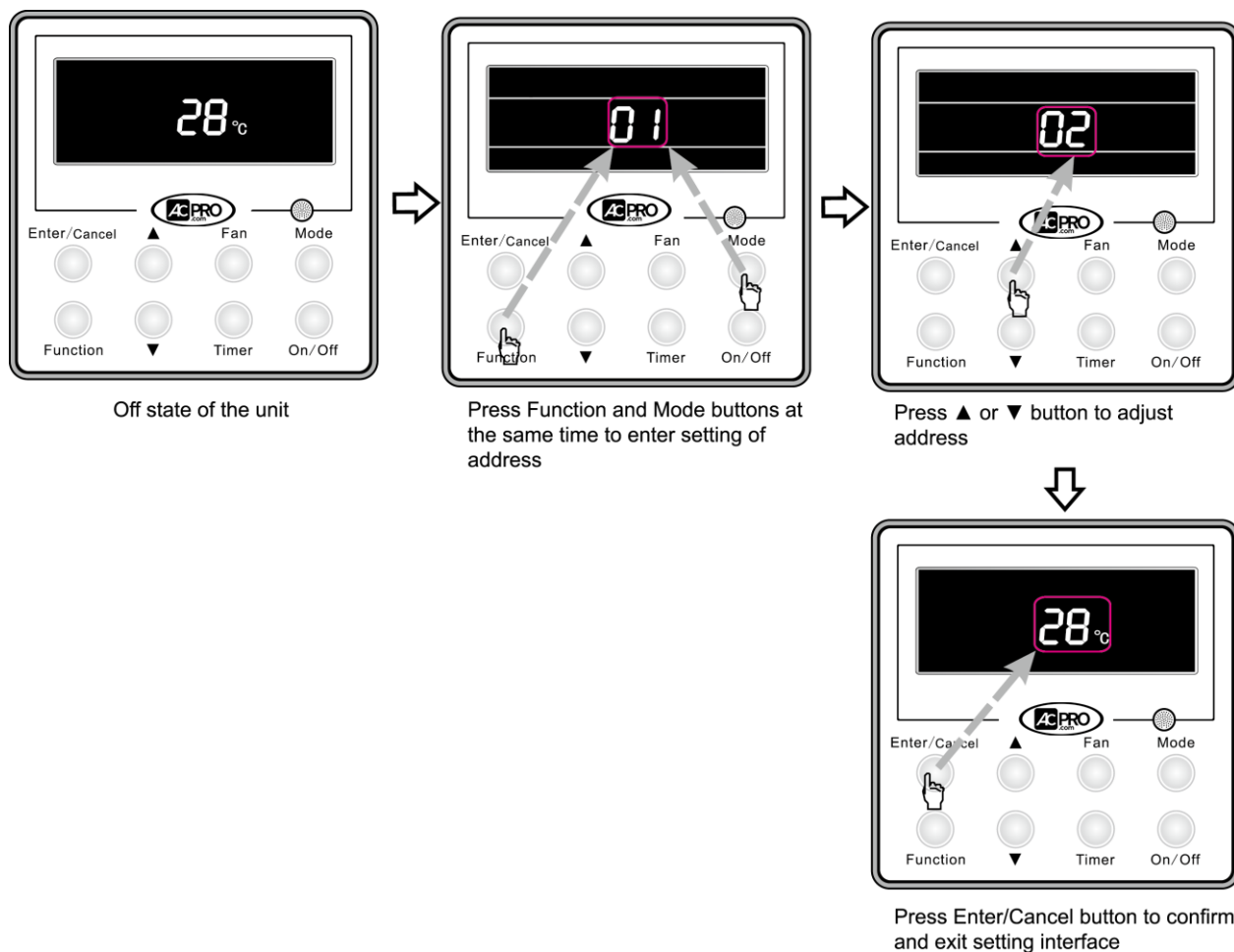
Figure 2-3-4 Enquiry and setting of wired controller's address

2.2.3.2 Setting of Master/Slave Wired Controller's Address

Under off status of the unit, press Enter/Cancel and Mode buttons at the same time for 5s to go to the enquiry and setting interface of master/slave wired controller. In this case, LCD displays wired controller's address (01 for master wired controller and 02 for slave wired controller). Press ▲ or ▼ button to adjust address of master/slave wired controller and then press Enter/Cancel button to confirm. If slave wired controller is set, the icon 🖳 will be displayed.

Note:

If there is only one wired controller, it only can be set as the master. If there are two wired controllers, one should be the master and the other should be the slave.

Setting of master/slave wired controller's address is shown as Figure 2-3-5 below:

Off state of the unit

Press Enter/Cancel and Mode buttons at the same time to enter setting of master/slave wired controller's address

Press ▲ or ▼ button to adjust address

Press Enter/Cancel button to confirm and exit setting interface; If slave wired controller is set, the corresponding icon will be displayed
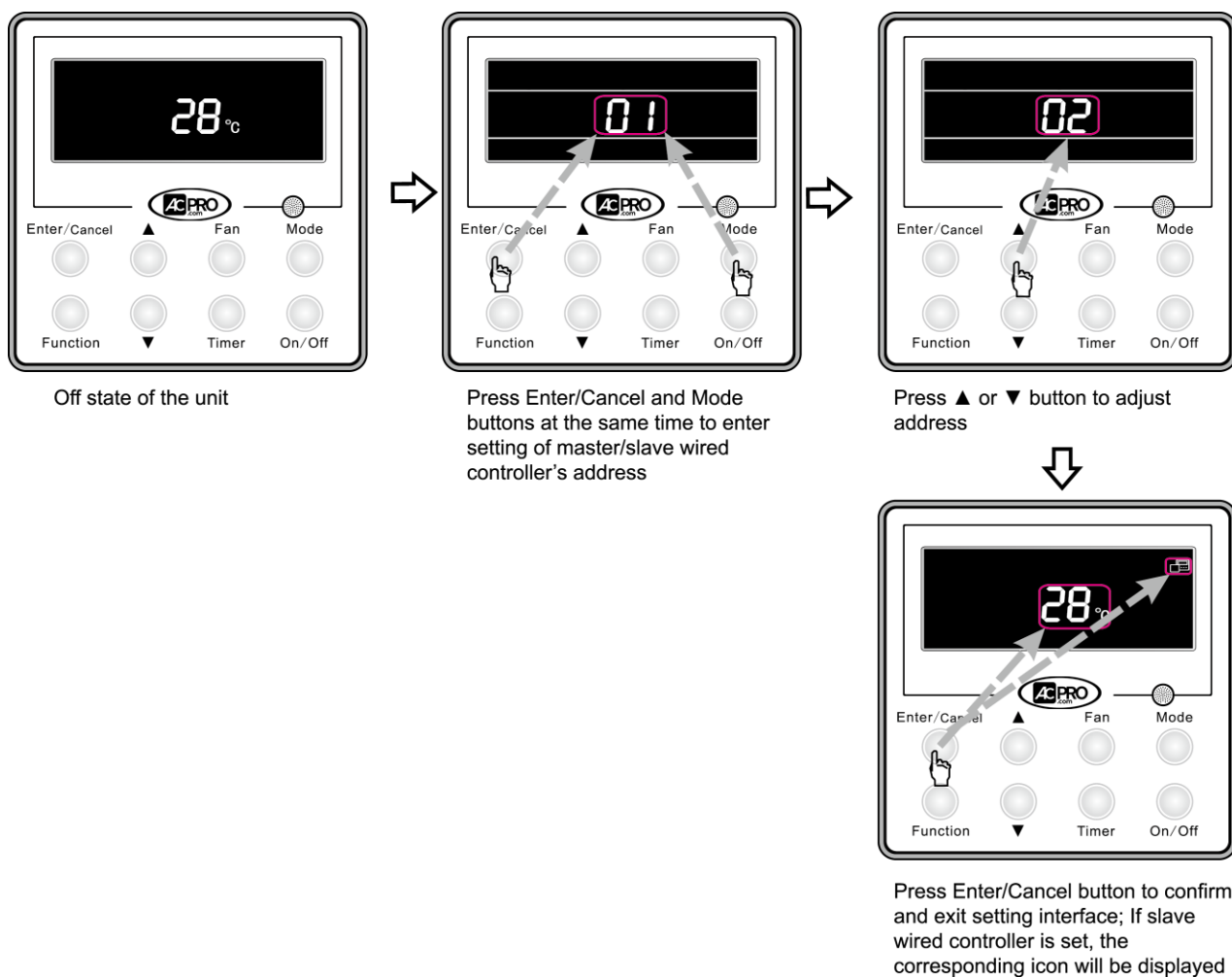
Figure 2-3-5 Enquiry and setting of master/slave wired controller's address

3 OPERATION INSTRUCTION OF SPECIAL FUNCTIONS

3.1 Setting of Filter Clean Reminder Function

When unit is on, press Function button to switch to filter clean reminder function. The FILTER icon will blink and then enter setting of filter clean reminder function. Timer zone displays the set pollution level and you can press ▲ or ▼ button to adjust the level. Then press Enter/ Cancel button to turn on this function.

When filter clean reminder function is turned on, press Function button to switch to filter clean reminder function. The FILTER icon will blink and press ▲ or ▼ button to adjust timer zone to display "00". Then press Enter/ Cancel button to cancel this function.

Setting of filter clean reminder function is shown as Figure 2-4-1 below:

Unit is on and filter clean reminder function is not turned on

Press Function button to switch to setting of filter clean reminder function

Press ▲ or ▼ button to set pollution level

Press ▲ or ▼ button to adjust timer zone to display "00"

Press Function button to switch to setting of filter clean reminder function

Press Enter/Cancel button to turn on filter clean reminder function

Press Enter/Cancel button to cancel filter clean reminder function

Figure 2-4-1 Setting of filter clean reminder function

When setting the filter clean reminder function, timer zone will display 2 digits, of which the former indicates the pollution degree of operating place and the latter indicates the accumulated operating time of indoor unit. There are 4 types of situations:

(1) Clean Reminder is off (Timer zone shows "00");

(2) Slight pollution: the former digit in timer zone shows 1 while the latter one shows 0, which indicates the accumulated operating time is 5500hr. Each time the latter digit increases 1, the accumulated operating time increases 500hr. When it reaches 9, it means the accumulated operating time is 10000hr;

(3) Medium pollution: the former digit in timer zone shows 2 while the latter one shows 0, which

indicates the accumulated operating time is 1400hr. Each time the latter digit increases 1, the accumulated operating time increases 400hr. When it reaches 9, it means the accumulated operating time is 5000hr;

(4) Heavy pollution: the former digit in timer zone shows 3 while the latter one shows 0, which indicates the accumulated operating time is 100hr. Each time the latter digit increases 1, the accumulated operating time increases 100hr. When it reaches 9, it means the accumulated operating time is 1000hr;

The detailed pollution level and the corresponding time is as shown in Table 2-4-1 below:

Table 2-4-1 Pollution level and corresponding time

Pollution level	Accumulated operating time (hour)	Pollution level	Accumulated operating time (hour)	Pollution level	Accumulated operating time (hour)
10	5500	20	1400	30	100
11	6000	21	1800	31	200
12	6500	22	2200	32	300
13	7000	23	2600	33	400
14	7500	24	3000	34	500
15	8000	25	3400	35	600
16	8500	26	3800	36	700
17	9000	27	4200	37	800
18	9500	28	4600	38	900
19	10000	29	5000	39	1000

If filter clean reminder function is turned on, the FILTER icon will be on.

(1) If cleaning time is not reached, no mater the setting is changed or not, the accumulated operating time won't be recalculated when pressing Enter/Cancel button;

(2) If cleaning time is reached, in unit on or off state, FILTER will blink every 0.5s for reminder. Press Function button to switch to FILTER icon and press ▲ and ▼ button to adjust the level. Then press Enter/Cancel button, so the accumulated operating time won't be cleared (If the adjusted level is higher than the present accumulated operating time, the icon won't blink any more; if the adjusted level is lower than the present accumulated operating time, the icon will go on blinking).

(3) The only way to cancel filter clean reminder function is to press Function button to switch to filter clean reminder function. The FILTER icon will blink and press ▲ or ▼ button to adjust timer zone to display "00". In this case, the accumulated operating time will be cleared.

3.2 Low Temperature Drying Function

Under dry mode and when set temperature is 16℃(61℉), continuously press ▼ button for twice and then the set temperature will be 12℃(54℉). In this case, the unit will enter low temperature drying function.

When low temperature drying function is turned on, press ▲ button or Mode button to exit low temperature drying function.

3.3 Lock Function

When unit is turned on normally or turned off, pressing ▲ and ▼ buttons at the same time for 5s will turn on Lock function. LCD will display ▣. Pressing ▲ and ▼ buttons at the same time for 5s to turn off this function.

When Lock function is turned on, any other buttons won't respond when pressing. The function can be memorized after power failure and then power recovery.

3.4 Memory Function

Press Mode and ▲ buttons at the same time for 5s under off state of the unit to turn on or cancel memory function. If memory function is set, MEMORY is displayed. If not, indoor unit is defaulted to be off after power recovery.

If memory function is set, indoor unit will resume original setting state after power failure and then power recovery.

Note:

If cut off power with 5s after memorized content is changed, the memorized content may be abnormal. Do not cut off power within 5s after memorized content is changed.

3.5 Door Control Function/Human Sensitive Function

Door control function or human sensitive function can be selected (More details please refer to Debugging Function). These two functions can't be turned on at the same time.

When door control function is selected, the wired controller will work when the room card is inserted and stop working when the room card is not inserted; when human sensitive function is selected, the wired controller will work when it senses there is somebody in the room and stop working when it senses there is nobody in the room. When the door control function senses the room card is not inserted or human sensitive function senses there is nobody in the room, the wired controller will display 📇 icon.

Note:

① In long-distance monitoring or centralized control, no matter the room card is inserted or not, the ON/OFF of unit can be controlled. If long-distance monitoring or centralized control information is received when the room card is not inserted, 📇 icon is cleared. When the card is reinserted, door control function is judged to be turned on. If long-distance monitoring or centralized control information is received when the room card is inserted, it will keep the original status.

② The unit can not be controlled by buttons when the card is not inserted.

③ When door control function and human sensitive function have been set at the same time, it is defaulted that door control function is valid and human sensitive function is invalid.

3.6 Switch between Fahrenheit and Centigrade

Under off state of the unit, press Mode and ▼ buttons at the same time for 5s to switch between Fahrenheit and Centigrade.

3.7 Enquiry of Ambient Temperature

Under off or on state of the unit, press it for 5s to view the ambient temperature. In this case, timer

zone displays ambient temperature type 01 or 02. Ambient temperature zone displays the corresponding temperature of that type. 01 stands for outdoor ambient temperature and 02 stands for the indoor ambient temperature after compensation. Press Mode button to switch between 01 and 02. Pressing other buttons except Mode button or receiving remote control signal will exit enquiry state. If there is no operation within 20s will also exit enquiry state.

Note:

① If the unit is not connected to outdoor ambient temperature sensor, display of outdoor ambient temperature will be shielding after energizing for 12hr.

② If there is malfunction of outdoor ambient temperature sensor, display of outdoor ambient temperature will be shielding after energizing for 12hr.

3.8 Enquiry of Historical Malfunction

Under off or on state of the unit, continuously press Function and ▼ buttons for 5s to view historical malfunction.

In enquiry state, set temperature displaying zone displays "00". Press ▲ and ▼ buttons to view the 5 malfunctions happened recently. The timer displaying position displays the detailed error code. The 5th displayed malfunction is the last malfunction.

3.9 Debugging Function

Under off state of the unit, press Function and Timer buttons at the same time for 5s to go to the debugging menu. Press Mode button to adjust the setting items and press ▲ or ▼ button to set the actual value.

3.9.1 Setting ambient temperature sensor (dual ambient temperature sensors function)

Under debugging state, press Mode button to adjust to "00" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 3 selections:

(1) The ambient temperature at air return is set as indoor ambient temperature (timer zone displays 01)

(2) The temperature at wired controller is set as indoor ambient temperature (timer zone displays 02)

(3) Select the temperature sensor at air return in cooling, dry and fan mode; select the temperature sensor at wired controller in heating and auto mode.

3.9.2 Selecting three speeds in high speed and three speeds in low speed of indoor fan motor

Under debugging state, press Mode button to adjust to "01" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

① Three speeds in low speed (LCD displays 01)

② Three speeds in high speed (LCD displays 02)

Three speeds in low speed include high, medium and low speeds; three speeds in high speed include super high, high and medium speed.

Note: For this series, this function is invalid.

3.9.3 Displaying setting of freeze protection error code

Under debugging state, press Mode button to adjust to "02" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

①　Displayed (LCD displays 01)

②　Not displayed (LCD displays 02)

It is defaulted to be not displayed for export unit and be displayed for domestic unit.

3.9.4 Setting refrigerant lacking protection function

Under debugging state, press Mode button to adjust to "04" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

①　With refrigerant lacking protection function (LCD displays 01)

②　Without refrigerant lacking protection function (LCD displays 02)

3.9.5 Selecting blowing residual heating of indoor unit

Under debugging state, press Mode button to adjust to "05" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

①　Mode 1 (LCD displays 00)

②　Mode 2 (LCD displays 01)

Note: Blowing residual heating of indoor unit

Mode 1: Unit stops when reaching temperature point and indoor fan motor does not stop in cooling mode; after unit stops when reaching temperature point in heating mode, duct type unit and floor ceiling unit blow residual heat for 60s and then stop indoor unit, while cassette type unit always operates in low fan speed and blows residual heat for 60s when there is malfunction.

Mode 2: After unit stops when reaching temperature point, the indoor fan motor stops operation with a 10s delay no matter in cooling mode or in heating mode.

3.9.6 Mode selecting of compressor electric heating belt

Under debugging state, press Mode button to adjust to "06" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

①　Mode 1 (LCD displays 00)

②　Mode 2 (LCD displays 01)

Note:

Mode 1: Compressor electric heating belt starts when outdoor ambient temperature is below 35℃(95℉) and stops when outdoor ambient temperature is above 37℃(99℉). When outdoor ambient temperature is within 35℃(95℉)~ 37℃(99℉), the belt will keep its previous operation state.

Mode 1: Compressor electric heating belt starts when outdoor ambient temperature is below -2℃(28℉) and stops when outdoor ambient temperature is above 0℃(32℉). When outdoor ambient temperature is within -2℃(28℉)~0℃(32℉), the belt will keep its previous operation state.

3.9.7 Selecting low-power consumption mode

Under debugging state, press Mode button to adjust to "07" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

①　With low-power consumption mode (LCD displays 00)

②　Without low-power consumption mode (LCD displays 01)

3.9.8 Selecting door control function

Under debugging state, press Mode button to adjust to "08" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

① Without door control function (LCD displays 00)

② With door control function (LCD displays 01)

3.9.9 Selecting human sensitive function

Under debugging state, press Mode button to adjust to "09" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

① Without human sensitive function (LCD displays 00)

② With human sensitive function (LCD displays 00)

3.9.10 Selecting long-distance monitoring or centralized controller

Under debugging state, press Mode button to adjust to "10" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

① Centralized controller (LCD displays 00)

② Long-distance monitoring (LCD displays 01)

3.9.11 Selecting fan mode of indoor fan motor

Under debugging state, press Mode button to adjust to "11" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 4 selections:

① P0 (LCD displays 00)

② P1 (LCD displays 01)

③ P3 (LCD displays 02)

④ P3 (LCD displays 03)

Note: You can select P01, P02, P03, P04, P05, P06, P07, P08, P09 in fan mode of indoor fan motor, which means different fan mode combinations are corresponding to different static pressure. Ex-factory defaulted mode is P05. You can set the mode through wired controller. S01, S02, S03……S12, S13 means the rotation speed of indoor unit is from low to high.

Table 2-4-2 Combination relationship of P01, P02, P03, P04, P05, P06, P07, P08, P09

Static pressure selection	Super high speed	High speed	Medium high speed	Medium speed	Medium low speed	Low speed	Quiet R1 speed	Quiet R2 speed	Quiet R13 speed
P01	S05	S03	S02	S02	S01	S01	S01	S01	S01
P02	S06	S04	S03	S03	S02	S02	S02	S02	S02
P03	S07	S05	S04	S04	S03	S03	S03	S03	S03
P04	S08	S06	S05	S05	S04	S04	S04	S04	S04
P05	S09	S07	S06	S06	S05	S05	S05	S05	S05
P06	S10	S08	S07	S07	S06	S06	S06	S06	S06
P07	S11	S09	S08	S08	S07	S07	S07	S07	S07
P08	S12	S10	S09	S09	S08	S08	S08	S08	S08
P09	S13	S11	S10	S10	S09	S09	S09	S09	S09

3.9.12 Selecting compensation of temperature sensor at air return

Under debugging state, press Mode button to adjust to "12" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 16 selections:

(1) Compensate 0℃(32℉) (LCD displays 00).
(2) Compensate 1℃(34℉) (LCD displays 01).
(3) Compensate 2℃(36℉) (LCD displays 02).
(4) Compensate 3℃(37℉) (LCD displays 03).
(5) Compensate 4℃(39℉) (LCD displays 04).
(6) Compensate 5℃(41℉) (LCD displays 05).
(7) Compensate 6℃(43℉) (LCD displays 06).
(8) Compensate 7℃(45℉) (LCD displays 07).
(9) Compensate 8℃(46℉) (LCD displays 08).
(10) Compensate 9℃(48℉) (LCD displays 09).
(11) Compensate 10℃(50℉) (LCD displays 10).
(12) Compensate 11℃(52℉) (LCD displays 11).
(13) Compensate 12℃(54℉) (LCD displays 12).
(14) Compensate 13℃(55℉) (LCD displays 13).
(15) Compensate 14℃(57℉) (LCD displays 14).
(16) Compensate 15℃(59℉) (LCD displays 15).

Note: Indoor ambient temperature compensation can be set through wired controller (E.g. If 02 is selected, it indicates the compensation temperature is 2℃ (36℉). If the indoor ambient temperature detected by the temperature sensor at air return is 29℃(84℉), the ambient temperature after compensation is 29℃(84℉)-2℃(36℉)=27℃(48℉)).

After finishing setting, press Enter/ Cancel button to save and exit setting. After entering this interface, the system will exit this menu if there is no operation on the button within 20s. Normal off state interface will be displayed and present setting will not be saved.

4 INSTALLATION OF WIRED CONTROLLER

4.1 Standard Accessories

Table 2-5-1 Standard Accessories of Wired Controller

Description	Quantity	Note
Socket base box installed in the wall	1	No.1 in Figure 2-5-1
Base plate of wired controller	1	No.2 in Figure 2-5-1
Screw M4×25	2	No.3 in Figure 2-5-1
Panel of wired controller	1	No.4 in Figure 2-5-1
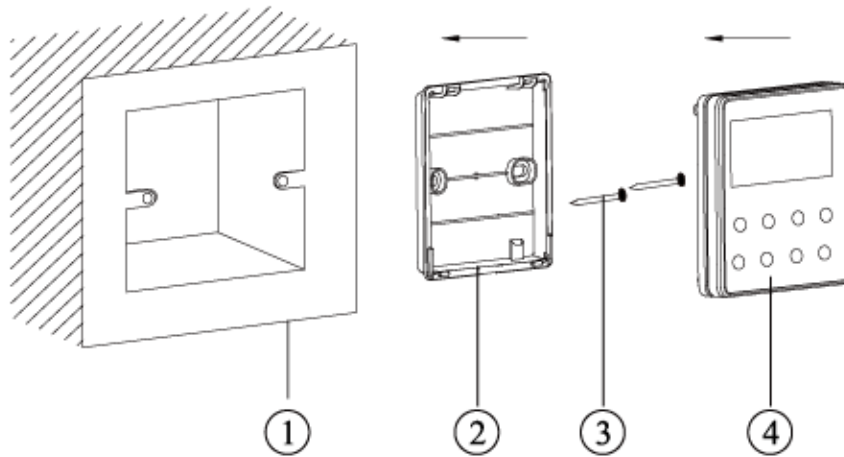
Figure 2-5-1

4.2 Installation Position and Requirement

(1) Prohibit installing the wired controller at the misty place or the place with direct sunlight.

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

(3) Prohibit installing the wired controller at the place where faces forward to the window, to avoid interference of another remote controller from neighborhood.

(4) Cut off the power of heavy current wire in the installation hole of the wall. All power should be cut off during installation.

(5) In order to avoid abnormal operation due to electromagnetic interference, etc., pay attention to the following notes during connecting wires:

1) Make sure the tie-in interface of communication wire is correct, otherwise it may lead to communication malfunction.

2) The signal wires and communication wires of wired controller should be separated from power cord and connection wire between indoor unit and outdoor unit.

3) If the air conditioner is installed at the strong electromagnetic interference place, signal wire and communication wire of wired controller must use shielding twisted wire.

4.3 Installation of Wired Controller

Firstly, the selection and connection way of wired controller's signal wire are as below:

(1) Choose suitable signal wire: 2-core signal wire (wire diameter $\geqslant 0.75mm^2$ (AWG18), wire length$<$50m (164ft) and the recommended length is 8m (26-1/4ft)).

(2) Make sure the power of indoor unit is cut off; fix the signal wire of wired controller on the wiring board for wired controller of indoor unit with screws; make sure the signal wire is solid.

Then, the detailed installation procedures of wired controller are as shown in Figure 2-5-2:
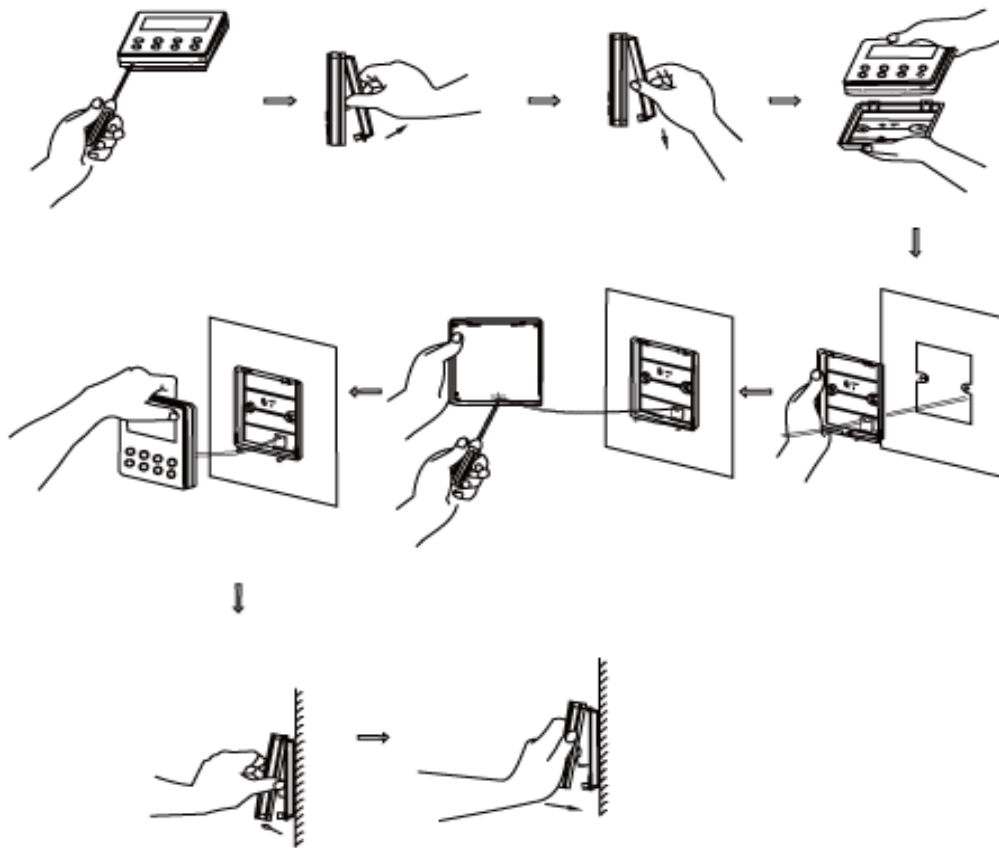
Figure 2-5-2 Installation of wired controller

Brief instructions of installation procedure:

1) Pull out the 2-core signal wire in the installation hole of the wall and then let this wire go through the hole at the back of wired controller's base plate.

2) Fix the base plate and installation hole of the wall together with screw M4×25mm(3/16×1inch).

3) Fix the above mentioned 2-core signal wire on the copper insert X1 and X2 with the equipped screws of wired controller.

4) Fasten the wired controller's panel with its base plate together.

4.4 Removal of Wired Controller
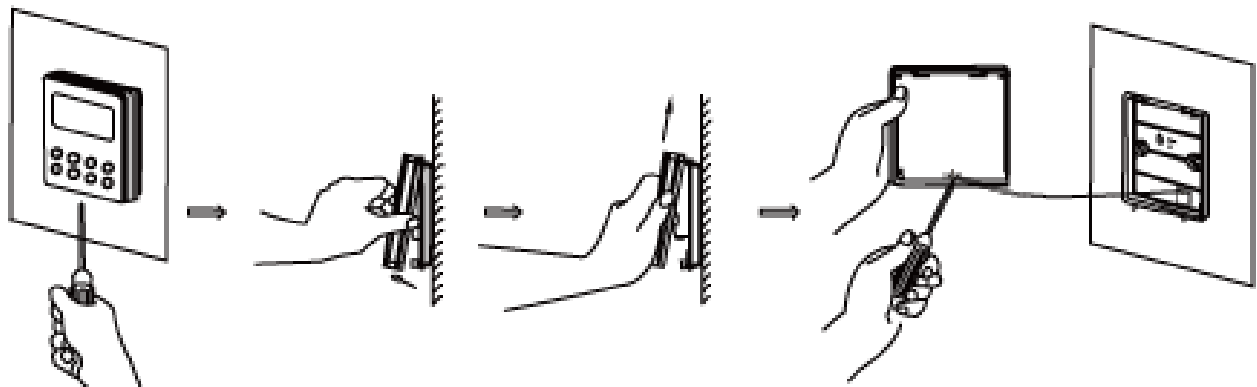
Figure 2-5-3 Removal of wired controller

5 TROUBLESHOOTING

5.1 Display of Error Code

Table 2-6-1 Error Code List

Error Code	Error
E1	Compressor high pressure protection
E2	Freeze protection
E3	Compressor low pressure protection, refrigerant lacking protection, refrigerant recycling mode
E4	Compressor high discharge temperature protection
E6	Communication malfunction
E8	Malfunction of indoor fan motor
E9	Full water protection
F0	Malfunction of indoor ambient temperature sensor
F1	Malfunction of evaporator temperature sensor
F2	Malfunction of condenser temperature sensor
F3	Malfunction of outdoor ambient temperature sensor
F4	Malfunction of discharge temperature sensor
F5	Malfunction wired controller temperature sensor
C5	Wong dial switch of capacity
EE	Malfunction of outdoor main control memory chip
PF	Malfunction of electric box sensor
H3	Compressor overload protection
H4	Overload protection
H5	IPM protection
H6	Malfunction of DC fan motor
H7	Drive desynchronizing protection
HC	pfc protection
L1	Malfunction of humidity sensor
Lc	Start-up failure
Ld	Compressor phase protection
LF	Power protection
Lp	Models of indoor unit and outdoor unit do not match with each other
U7	Direction changing malfunction of 4-way valve
P0	Drive reset protection
P5	Overcurrent protection
P6	Communication malfunction between main control and drive
P7	Malfunction of drive module sensor
P8	High temperature protection of drive module
P9	Zero-cross protection
PA	AC current protection
PC	Malfunction of drive current
Pd	Sensor connection protection
PE	Temperature excursion protection
PL	Low voltage protection of bus bar
PH	High voltage protection of bus bar
PU	Charging circuit malfunction
PP	Abnormity of input voltage
ee	Malfunction of outdoor drive memory chip

When there is a malfunction during operation, error will be displayed on the temperature displaying zone of LCD. When several malfunctions occur at the same time, these error code will be displayed circularly.

When there is a malfunction, please turn off the unit and ask the professional for maintenance.

For example, E1 means high pressure protection during operation.

Figure 2-6-1

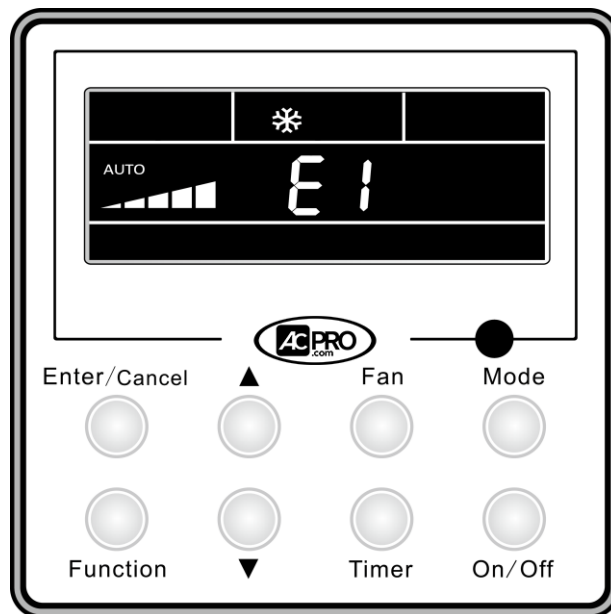# 6 CENTRALIZED CONTROLLER

6.1 Smart Zone Controller

6.1.1 Function

The smart zone controller can directly control up to 16 sets of indoor units in a control network and is available to check the running status of any unit through the LCD, including running mode, timer, fan speed, centralized control and shielding setting etc.

6.1.2 Outline Drawing of Press Buttons

Figure 2-7-1

6.1.3 Functions of Press Buttons

Table 2-7-1 Functions of Press Buttons

No.	Name	Function Description
1	Mode	It is used for the switchover among different modes.
2	Fan	It is used to set the fan speed, high, medium, low or auto.
3	On/Off	It is used to set the on/off status of the indoor unit.
4	▲	1. Under the single/centralized control status: It is used to set the running temperature of the indoor unit with max.30°C(86℉) anmin.16°C(61℉); 2. Under the timing setting status: It is used to set the timing period with max.24 hours and min.0 hour;
5	▼	3. Under the clock setting status: it is used to set the hour (max.:23, min.: 0) and minute (max.:59, min.: 0) of the clock.
6	Mon 1/9	It is used for the switchover between unit 1 and unit 9; Under the timing or clock setting status, it indicates Monday.
7	Tue 2/10	It is used for the switchover between unit 2 and unit 10; Under the timing or clock setting status, it indicates Tuesday.
8	Wed 3/11	It is used for the switchover between unit 3 and unit 11; Under the timing or clock setting status, it indicates Wednesday.
9	Thu 4/12	It is used for the switchover between unit 4and unit 12; Under the timing or clock setting status, it indicates Thursday.
10	Fri 5/13	It is used for the switchover between unit 5and unit 13; Under the timing or clock setting status, it indicates Friday.
11	Sat 6/14	It is used for the switchover between unit 6 and unit 14; Under the timing or clock setting status, it indicates Saturday.
12	Sun 7/15	It is used for the switchover between unit 7 and unit 15; Under the timing or clock setting status, it indicates Sunday.
13	8/16	It is used for the switchover between unit 8 and unit 16.
14	Timer/Time	It is used to set the timing or on/off time of the selected indoor unit as well as to set the clock of the system.
15	Central	It is used for the switchover between single and centralized control modes.
16	Shield	It is used to deactivate some or all functions of a single or a group the indoor unit(s).
17	All on/off	It is used to start/stop all indoor units.

6.1.4 LCD of the Controller

6.1.4.1 Outline Drawing of the LCD
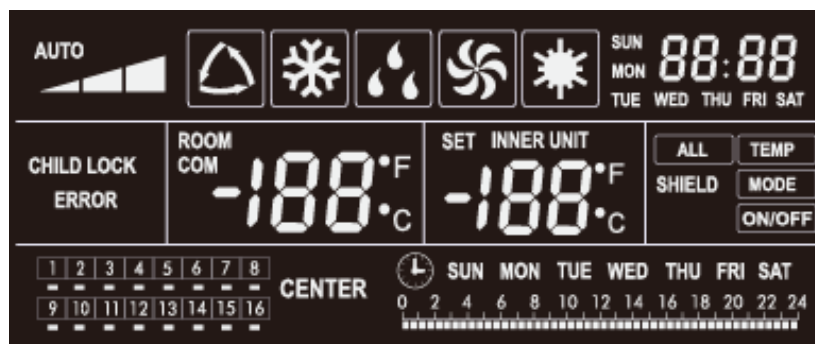
Figure 2-7-2

6.1.4.2 Introduction to Symbols on the LCD

Figure 2-7-3

Table 2-7-2 Introduction to the Symbols on the LCD

No.	Name	Description
1	Fan speed	It displays the fan speed of the indoor unit, high, medium, low and auto.
2	Running mode	It displays the running mode of the indoor unit, auto, cool, dry, fan and heat.
3	System clock	It displays the current time (hour and minute) in 24-hour time system and also the week day.
4	Shield	It displays the shield status, "ALL', "TEMP", "MODE" and 'On/Off".
5	Weekly timer	It displays the timing period (unit: 0.5 hour) which will circulate every week.
6	Set temperature Indoor unit code	It displays the set temperature, indoor unit code (01-16), and symbols of Celsius and Fahrenheit scale.
7	Control mode	It displays "CENTER" under the centralized control mode and no display under the single control mode.
8	Ambient temperature Serial port	It displays the ambient temperature, serial port as well as symbols of Celsius and Fahrenheit scale.
9	Indoor unit code On/off status	Numbers indicate the indoor unit codes which will be displayed when the corresponding indoor unit is online; "" indicates the on/off status of the indoor unit, its flashing for "on" or else for "off"
10	Error Child lock	It displays the error codes when some error(s) arises and also "CHILD LOCK" when this function is activated.

6.1.4.3 Network Topology

Network Connection of the Smart Zone Controller
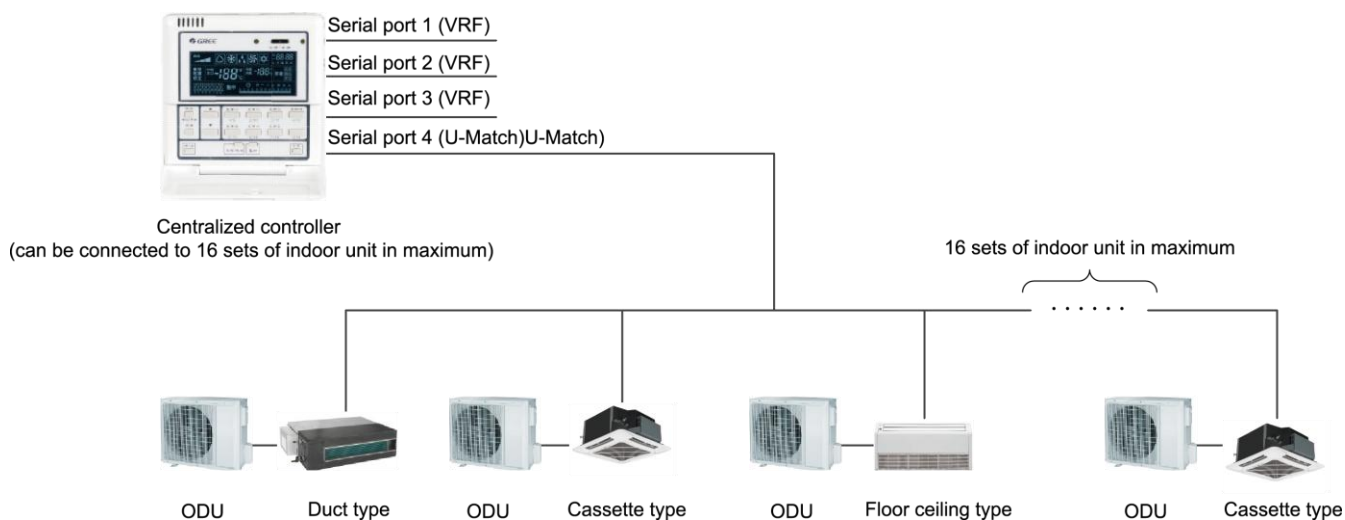
Figure 2-7-4

6.1.4.4 Dimensions
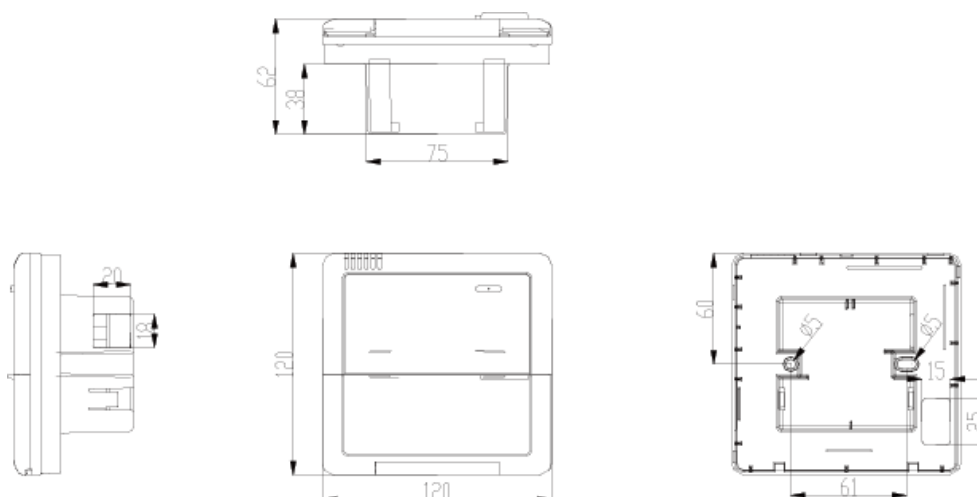
Figure 2-7-5

6.2 Additional Special Functions

6.2.1 Door control function

Door control function is available for this series. In order to achieve this function, please select the door control accessories from Gree.

(1) Interface instructions

1) The interface printing is DOOR-C and the type is B2B-XH-B. The wires of door control accessories must be connected to this interface;

2) Electrical characteristic: none;

3) Working principle: when the card is inserted, this interface is short-circuited; when the card is not inserted, this interface is cut off;

Connect the door control detection port of indoor mainboard with the interface of door control board (CN1 in the following Figure); connect the door control signal to the door control signal input port (X1 and

X2 in the following Figure). X1 is AC 220V signal input and X2 is DC +5V to 24V. You can only choose X1 or X2. Definition of interface is as shown in Figure below:
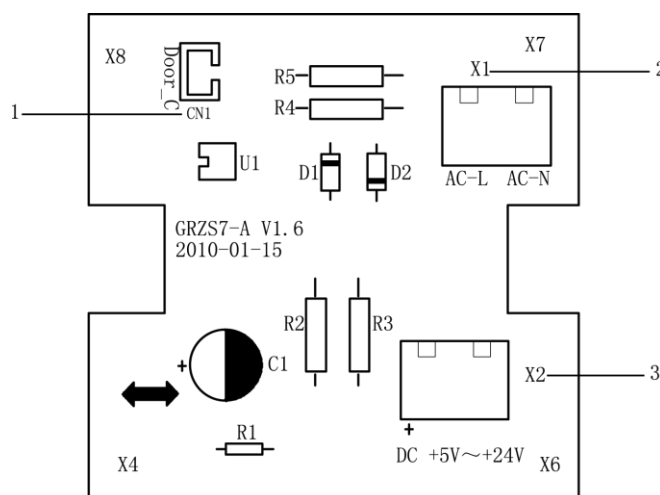
Figure 2-7-6 Illustration of door control port

Table 2-7-3 Door control wiring port

No.	Terminal name	Terminal instruction
1	CN1	CN1 wiring terminal and door control interface of indoor mainboard
2	X1(AC-L, AC-N)	X1(AC-L, AC-N) wiring terminal, connected to door control input signal, rated voltage 220V.
3	X2	X2 wiring terminal, connected to door control input signal

(2) Function instructions:

In order to achieve this function, set it through wired controller and refer to the following operation method. It is defaulted that this function is not activated; if this function is set and door control accessories are connected, the unit will control the ON/OFF of unit according to the card state detected by door control detection board. When the card is not connected, the unit will turn to standby state. If the unit is with wired controller, 🔌 icon will be displayed on the wired controller.

If the unit is without wired controller, there will be no display. The unit will control the ON/OFF of unit according to the detected information.

(3) Setting method:

Under off state of the unit, press Function and Timer buttons at the same time for 5s to go to the debugging menu. Press Mode button to adjust to "08" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

1) Without door control function (LCD displays 00)

2) With door control function (LCD displays 01)

Choose the second selection and then press Enter/Cancel button to save and exit setting. Now, door control function is activated. The unit will memorize this setting status. The setting value will be memorized after power failure. The detailed setting is as shown in the Figure below:

Off state of the unit

Press Function and Timer buttons at the same time for 5s to enter the interface of parameter setting

Press Mode button to adjust to "08" in temperature displaying zone and enter setting of door control function

Press Enter/Cancel button to save and exit setting; now, door control function is activated

Press ▲ or ▼ button to adjust to 01 in timer zone

Figure 2-7-7

Note:
You can purchase the accessory from Gree. The information is as below:

Name	Product code	Remark
Controller for door control function (MK03)	MC207022	One controller for one unit

6.2.2 Human sensitive function

You can purchase the module of human sensitive function for this series. An interface for this module is reserved on the mainboard of indoor unit.

(1) Interface instruction:

1) The printing is CN23 and the interface type is JST B3B-PH-K-S;

2) Electrical characteristic: 1-pin: +12V; 2-pin: detection port; 3-pin: GND; current: 150mA;

3) Working principle: when the module detects there is nobody in the room, 2-pin and 3-pin are short-circuited and they are low electrical level; when there are somebody in the room, 2-pin output is high electrical level.

(2) Function instructions:

In order to achieve this function, set it through wired controller and refer to the following operation method. It is defaulted that this function is not activated; if this function is set and human sensitive module is connected, the unit will control the ON/OFF of unit according to the signal detected by human sensitive module. When there is nobody in the room and the unit is with wired controller, 🔛 icon will be displayed on the wired controller; if the unit is without wired controller, there will be no display. The unit

will control the ON/OFF of unit according to the detected information.

(3) Setting method:

Under off state of the unit, press Function and Timer buttons at the same time for 5s to go to the debugging menu. Press Mode button to adjust to "09" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

1) Without human sensitive function (LCD displays 00)

2) With human sensitive function (LCD displays 01)

Choose the second selection and then press Enter/Cancel button to save and exit setting. Now, human sensitive function is activated. The unit will memorize this setting status. The setting value will be memorized after power failure. The detailed setting is as shown in the Figure below:
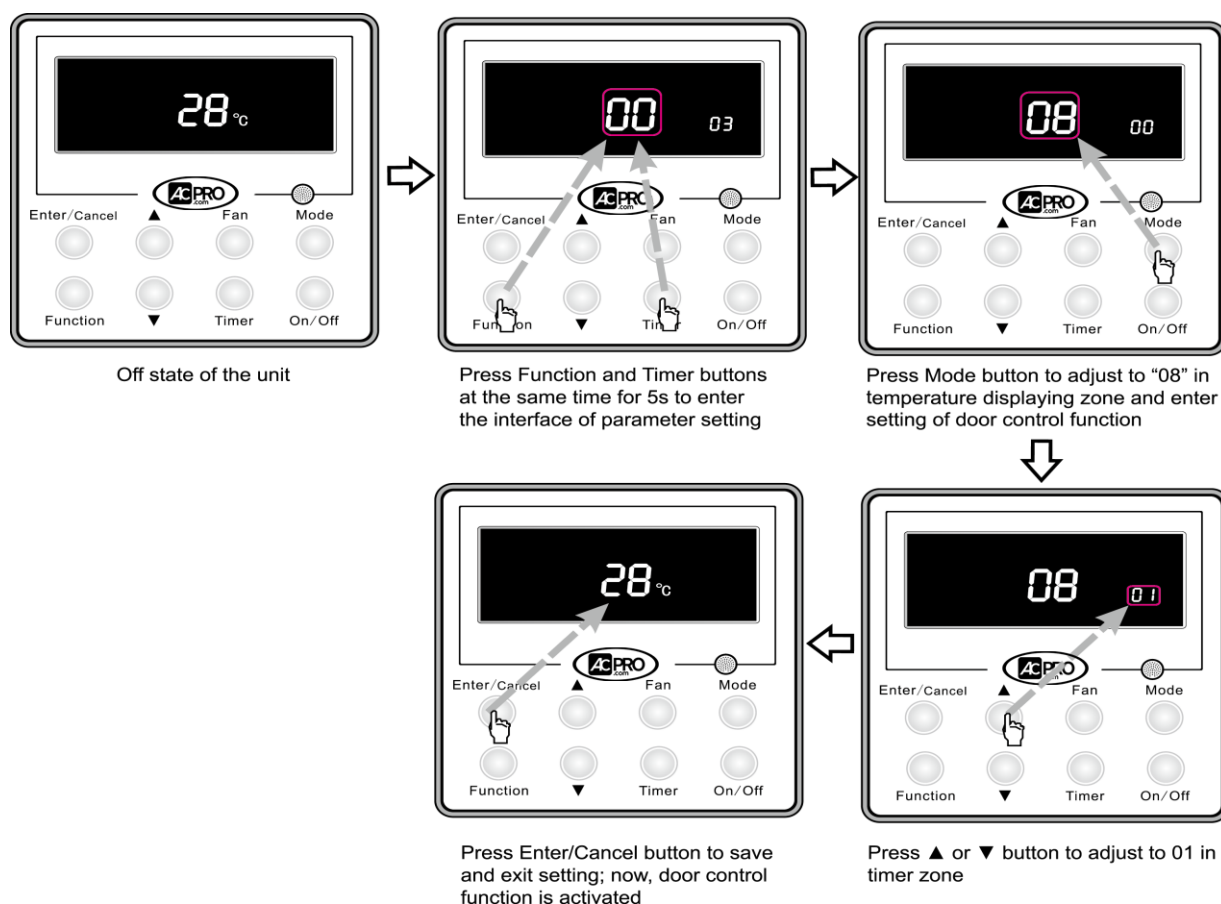

Off state of the unit

Press Function and Timer buttons at the same time for 5s to enter the interface of parameter setting

Press Mode button to adjust to "09" in temperature displaying zone and enter setting of human sensitive function

Press ▲ or ▼ button to adjust to 01 in timer zone

Press Enter/Cancel button to save and exit setting; now, human sensitive function is activated

Figure 2-7-8

Note:

When door control function and human sensitive function have been set at the same time, it is defaulted that door control function is valid and human sensitive function is invalid.

The user can purchase the human sensitive module by himself. Please pay attention to the following notes:

①   There is the needle stand interface on the mainboard. The interface model inserted into this needle stand must be PH-3P-K;

②   The current consumption of module can not exceed the current capacity provided by this interface.

6.2.3 MODBUS interface

The indoor unit of this series has MODBUS interface. If the user needs to connect the unit to the management system of the building, please enquire Gree for the MODBUS protocol.
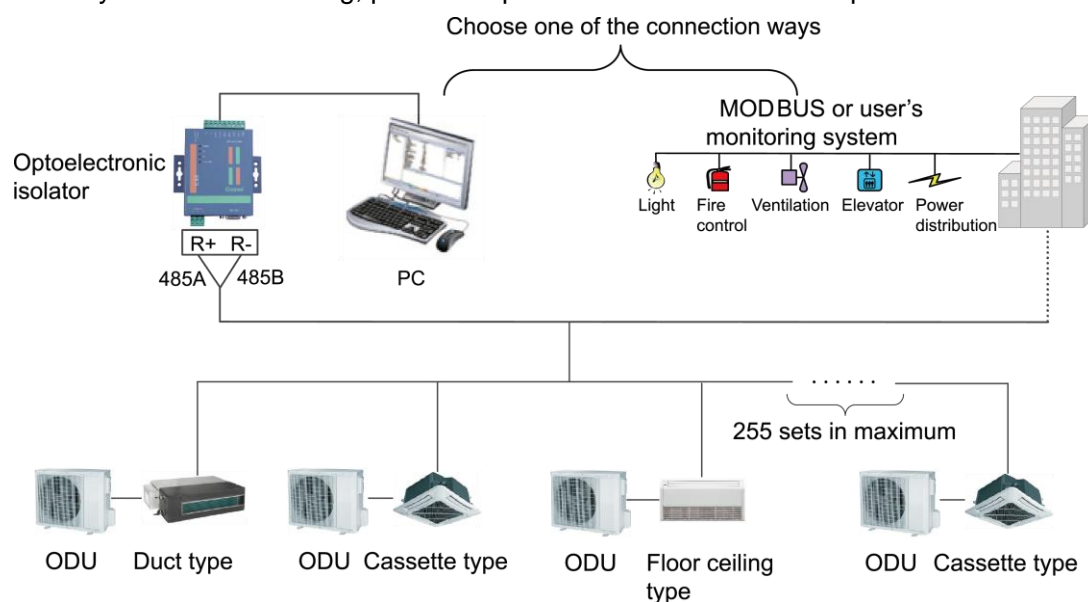
Figure 2-7-9

(1) 1. Interface instruction:

1) The printing is COM-BMS1 and the interface type is B4B-XH-K3;

2) Electrical characteristic: baud rate: 9600bps; standard: RS485;

3) Working principle:

The indoor mainboard can send out the unit operation state through this interface and receive logical control information to realize control and monitor of the unit.

(2) Function instructions:

In order to achieve this function, set the address mode and address through wired controller. Please refer to Point 3 for the setting method. You must set the address mode into long-distance control address mode.

The address mode is defaulted to be connecting to centralized controller mode and the defaulted address is 1.

(3) Setting method:

1) Firstly, set the address mode of wired controller into centralized controller address mode. The setting method is:

Under off state of the unit, press Function and Timer buttons at the same time for 5s to go to the debugging menu. Press Mode button to adjust to "10" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

2) Centralized controller address mode (LCD displays 00)

3) Long-distance control address mode (LCD displays 01)

Choose the second selection and then press Enter/Cancel button to save and exit setting. Now, the address of wired controller is set to match the address of long-distance control. The unit will memorize this setting status. The setting value will be memorized after power failure. The detailed setting is as
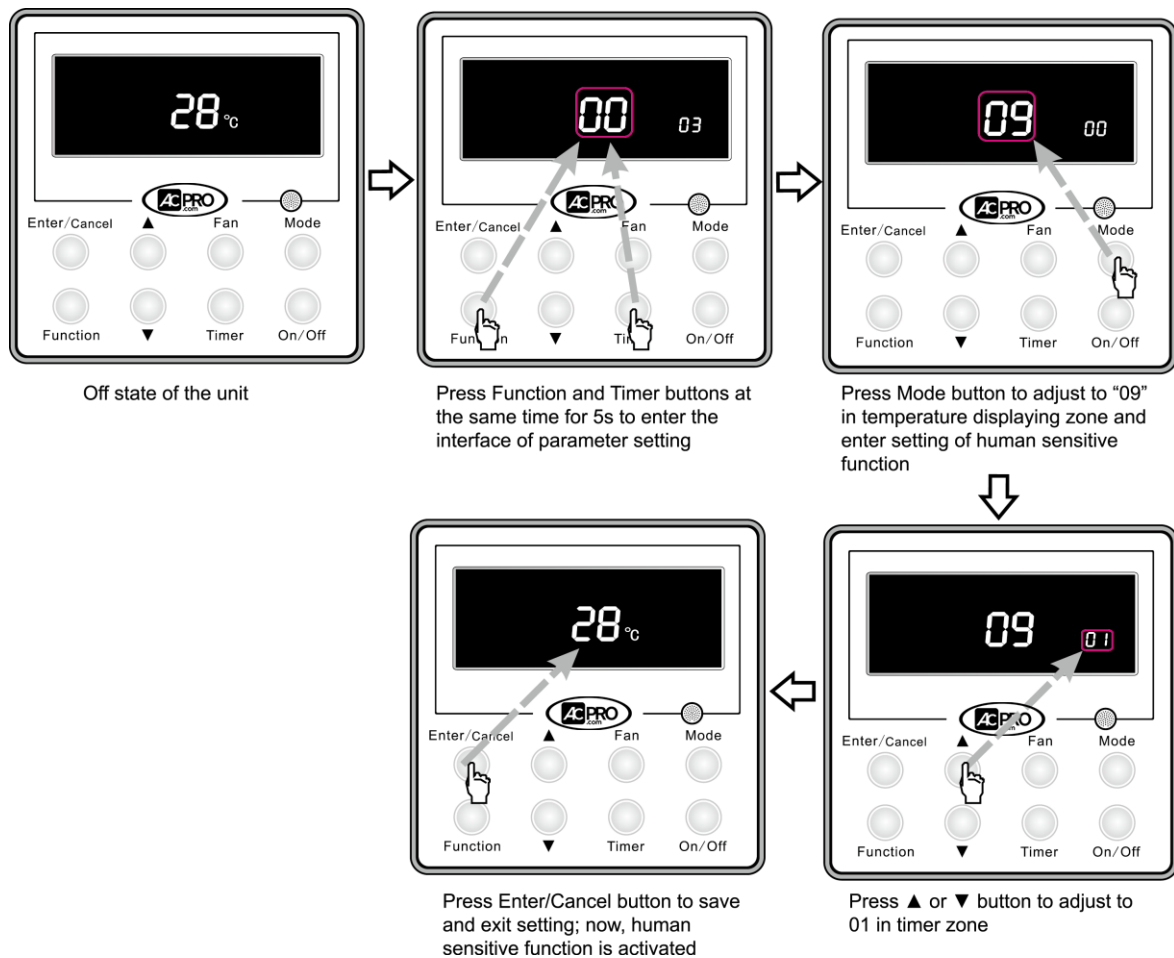
shown in the Figure below:

Off state of the unit

Press Function and Timer buttons at the same time for 5s to enter the interface of parameter setting

Press Mode button to adjust to "10" in temperature displaying zone and enter selection of centralized controller or long-distance control.

Press Enter/Cancel button to save and exit setting; now, the wired controller address is long-distance control address

Press ▲ or ▼ button to adjust to 01 in timer zone

Figure 2-7-10

4) Address setting of each unit: when the address mode is set to be long-distance control address mode. The address setting value range is 01~255. The setting method is:

Under off state of the unit, press Function and Mode buttons at the same time for 5s to enter setting interface of wired controller address. LCD displays address sequence. Press ▲ or ▼ button to adjust the address sequence and then press Enter/Cancel button to confirm. The setting value will be memorized after power failure. The detailed setting is as shown in the Figure below:

Off state of the unit

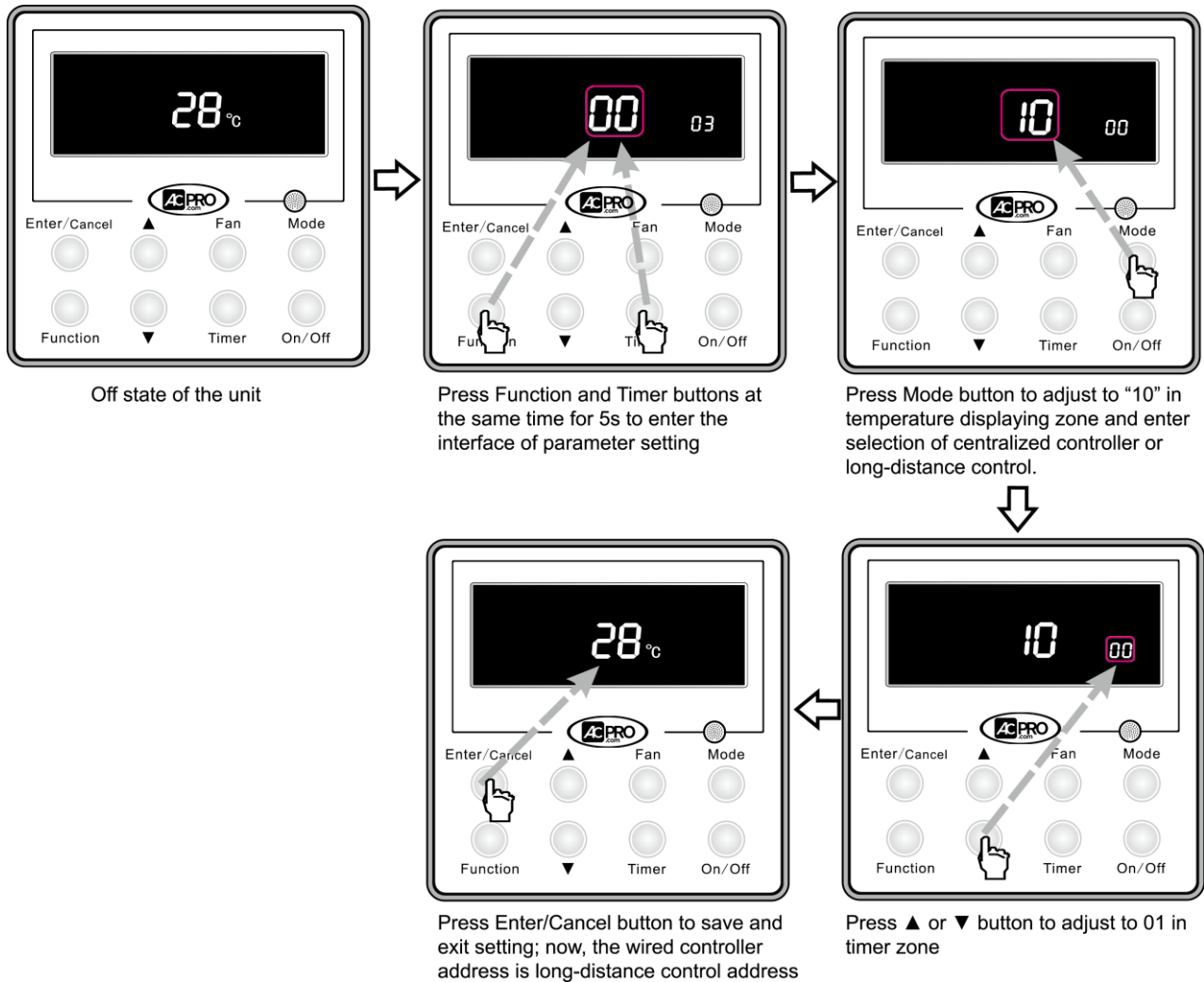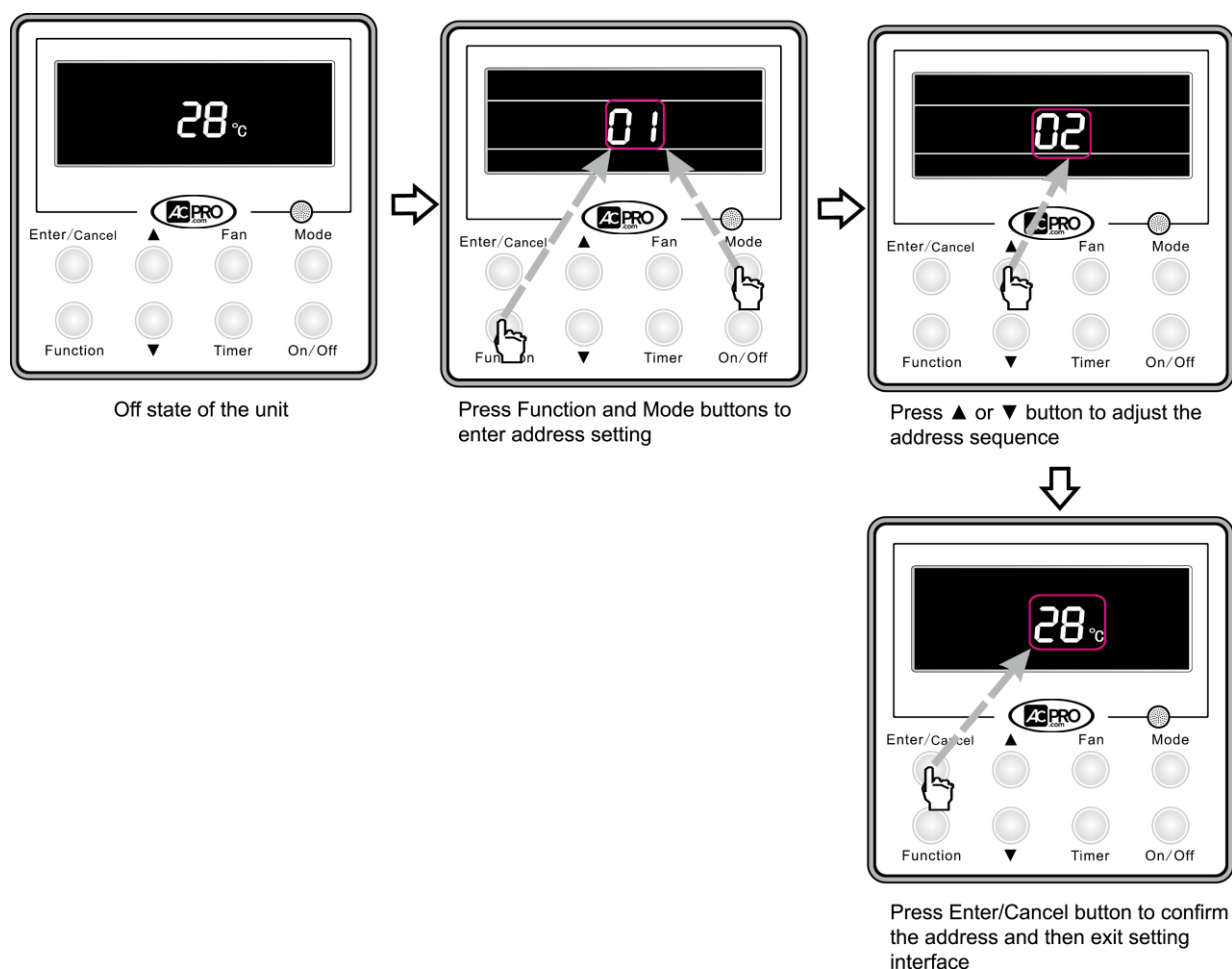Press Function and Mode buttons to enter address setting

Press ▲ or ▼ button to adjust the address sequence

Press Enter/Cancel button to confirm the address and then exit setting interface

Figure 2-7-11

Note:

① In order to realize the MODBUS interface function, the address mode of the unit must be set into long-distance control address mode; you can not set it into centralized control address mode, otherwise, this function can not be realized;

② The unit can not be connected to MODBUS and centralized controller at the same time; only one of them can be selected;

③ 255 sets of unit in maximum can be connected in the same network; the unit addresses in the same network must be different, otherwise, the unit control will be affected;

④ Perform wiring when the unit power is cut off.

6.2.4 Connect to interface of centralized controller:

The indoor unit is with the interface of centralized controller. When centralized controller is connected, centralized control of unit can be realized when the wired controller is not connected;

(1) Interface instruction:

1) The printing is COM-BMS2, COM-BMS3 and the interface type is B2B-XH-K3;

2) Electrical characteristic: none;

3) Working principle: centralized control the communication of indoor mainboard and realize the unit control;

(2) Function instructions:

In order to achieve this function, set the address mode and address through wired controller. Please

refer to Point 3 for the setting method. The address mode is defaulted to be connecting to centralized controller mode and the defaulted address is 1;

When the centralized controller is connected, centralized control of the unit can be realized to control unit ON/OFF, operation mode, set fan speed/temperature and weekly timer.

(3) Setting method:

Firstly, set the address mode of wired controller into centralized controller address mode. The setting method is:

1) Under off state of the unit, press Function and Timer buttons at the same time for 5s to go to the debugging menu. Press Mode button to adjust to "10" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 2 selections:

① Centralized controller address mode (LCD displays 00).

② Long-distance control address mode (LCD displays 01).

Choose the first selection and then press Enter/Cancel button to save and exit setting. Now, the address of wired controller is set to match the address of centralized controller. The unit will memorize this setting status. The setting value will be memorized after power failure. The detailed setting is as shown in the Figure below:

Off state of the unit

Press Function and Timer buttons at the same time for 5s to enter the interface of parameter setting

Press Mode button to adjust to "10" in temperature displaying zone and enter selection of centralized controller or long-distance control.

Press Enter/Cancel button to save and exit setting; now, the wired controller address is central controller address
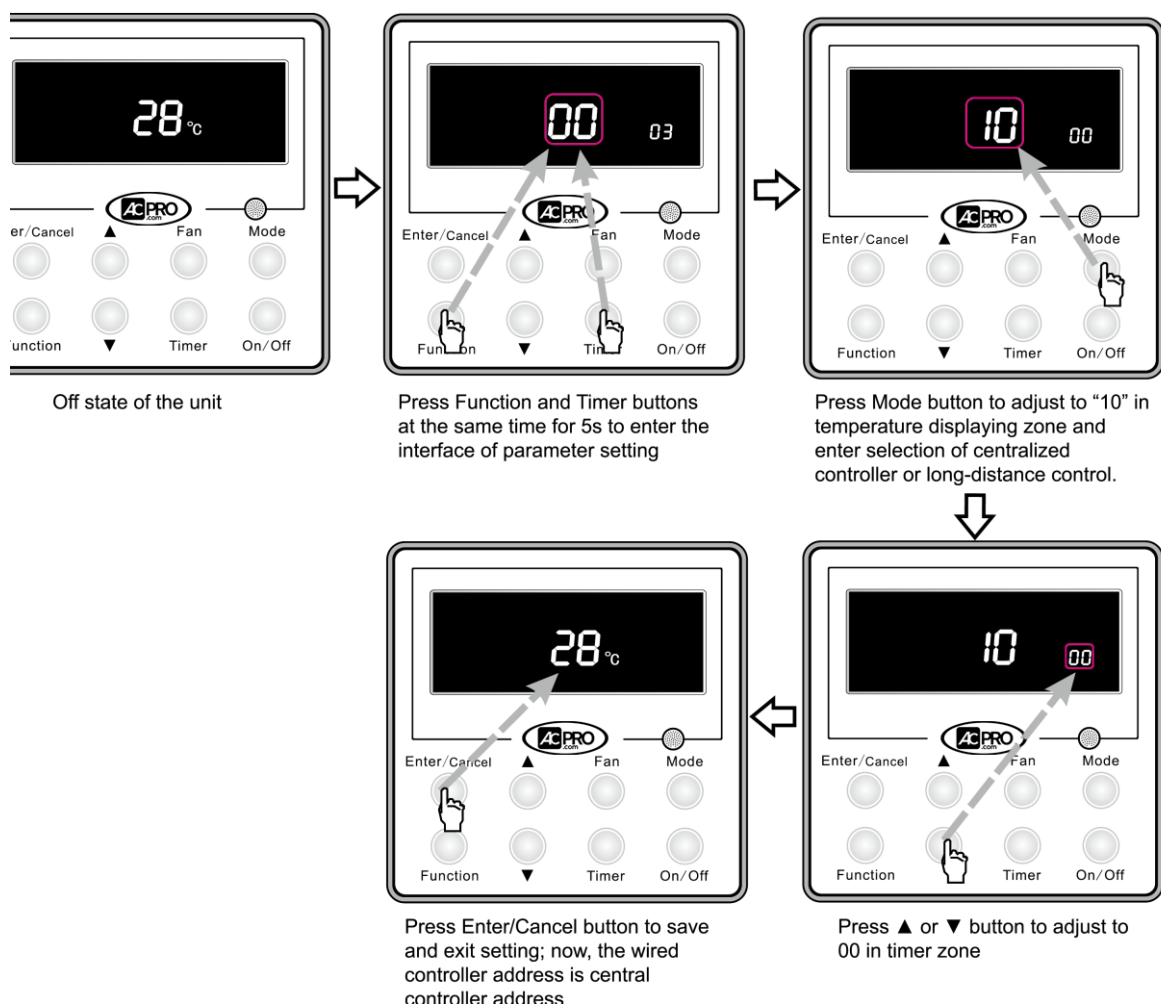
Press ▲ or ▼ button to adjust to 00 in timer zone

Figure 2-7-12

2) Address setting of each unit: when the address mode is set to be centralized controller address mode. The address setting value range is 01~16. The setting method is:

Under off state of the unit, press Function and Mode buttons at the same time for 5s to enter setting interface of wired controller address. LCD displays address sequence. Press ▲ or ▼ button to adjust the address sequence and then press Enter/Cancel button to confirm. The setting value will be memorized after power failure. The detailed setting is as shown in the Figure below:

Off state of the unit   Press Function and Mode buttons to enter address setting   Press ▲ or ▼ button to adjust the address sequence

Press Enter/Cancel button to confirm the address and then exit setting interface
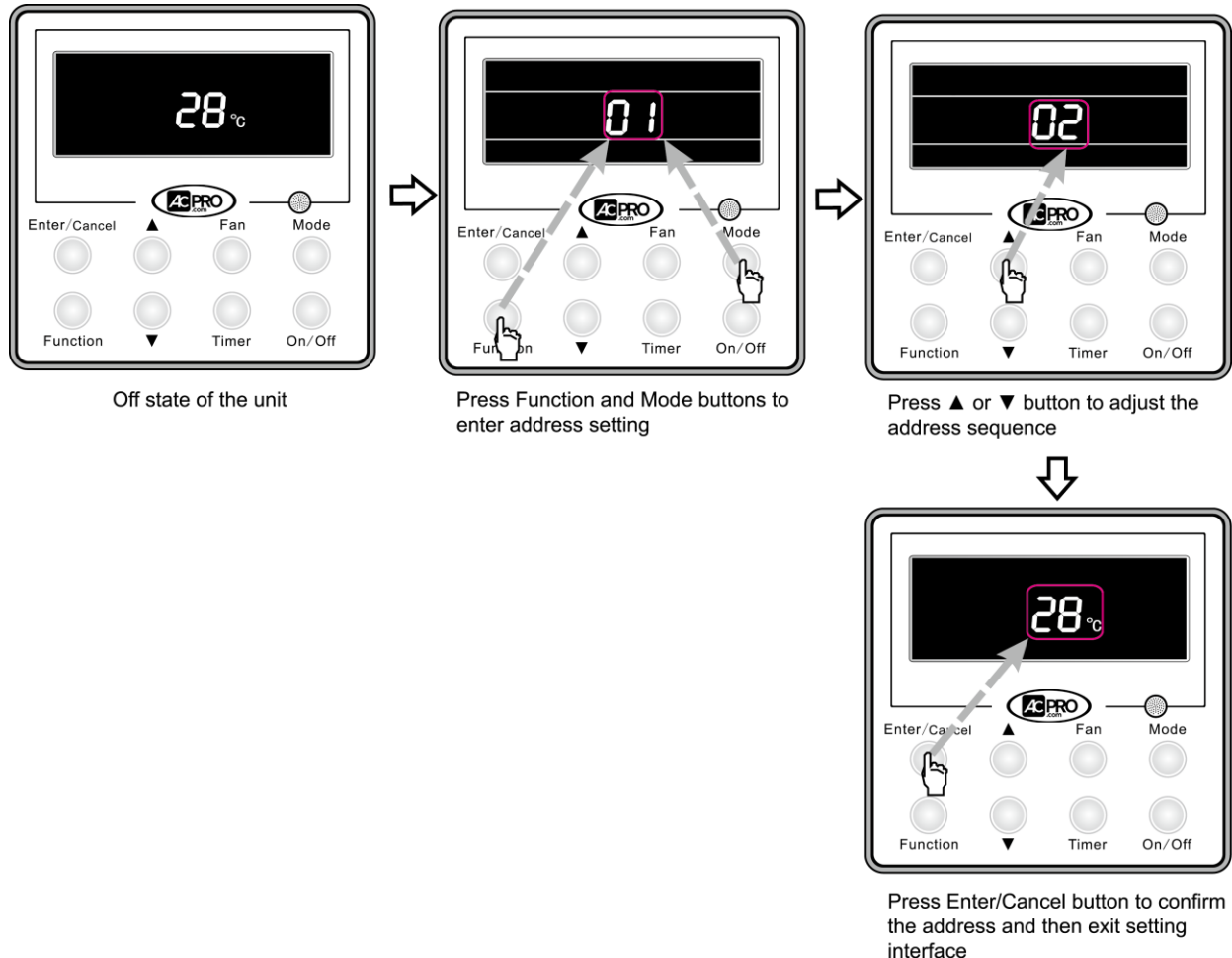
Figure 2-7-13

When the address is set, the wired controller can be removed and connect the centralized controller to the indoor mainboard. Then connect the required units to realize centralized control of these units;

Note:

①　When centralized controller is to be connected, set the address mode into centralized controller address mode through wired controller. Long-distance control address mode can not be set;

②　The unit addresses in the same network must be different, otherwise, communication malfunction will occur and the unit can not work normally;

③　When centralized controller is to be connected, the unit address range is 1-16. Only 16 sets of unit in maximum can be connected

④　The code and model of wired controller is as below:

CARE AND CLEANING

CLEANING THE FILTER

- Never remove the air filter from the unit except for cleaning; otherwise it may cause dust or dirt to restrict airflow to the unit.
- When the air conditioning unit is used in an environment with heavy dust, the air filter should be cleaned often (generally once every two weeks).

Perform the following on an annual basis:

- Clean or replace air filter.
- Inspect drain line for potential clogs or leaks.
- Hose off both sides of the coil in the outdoor unit to remove loose debris or dirt buildup.

⚠ CAUTION

Take notice of the following items before cleaning your air conditioning unit.

- To avoid electric shock or injury, do not attempt to clean the unit unless it has been turned off and disconnected from the main power supply.
- Do not wash the unit with water; this may cause an electric shock.
- During cleaning, be sure to use a stable standing platform.

TROUBLESHOOTING

PROBLEM	CAUSE/SOLUTION
System does not restart.	**Cause:** The system has a built-in 5-minute delay to prevent short and/or rapid cycling of the compressor. **Solution:** Wait 5 minutes for the protection delay to expire.
Indoor unit emits unpleasant odor when started	**Cause:** Typically unpleasant odors are the result of mold or mildew forming on the coil surfaces or the air filter. **Solution:** Wash indoor air filter in warm water with mild cleaner. If odors persist, contact a qualified service professional to clean the coil surfaces.
You hear a "water flowing" sound.	**Cause:** It is normal for the system to make "water flowing" or "gurgling" sounds from refrigerant pressures equalizing when the compressor starts and stops **Solution:** The noises should discontinue as the refrigerant system equalizes after two or three minutes.
A thin fog or vapor coming out of the discharge register when system is running.	**Cause:** It is normal for the system to emit a slight fog or water vapor when cooling extremely humid warm air. **Solution:** The fog or water vapor will disappear as the system cools and dehumidifies the room space.
You hear a slight cracking sound when the system stops or starts.	**Cause:** It is normal for the system to make "slight cracking" sounds from parts expanding and contracting during system starts and stops. **Solution:** The noises will discontinue as temperature equalizes after 2 or 3 minutes.
The system will not run.	**Cause:** There are a number of situations that will prevent the system from running. **Solution:** Check for the following: • Circuit breaker is "tripped" or "turned off." • Power button of controller is not turned on. • Controller is in sleep mode or timer mode. • Otherwise, contact a qualified service professional for assistance.
The unit is not heating or cooling adequately.	**Cause:** There are a number of reasons for inadequate cooling or heating. **Solution:** Check the following: • Remove obstructions blocking airflow into the room. • Clean dirty or blocked air filter that is restricting airflow into the system. • Seal around door or windows to prevent air infiltration into the room. • Relocate or remove heat sources from the room.
Water leaking from the indoor unit into the room.	**Cause:** While it is normal for the system to generate condensate water in cooling mode, it is designed to drain this water via a condensate drain system to a safe location. **Solution:** If water is leaking into the room, it may indicate one of the following. • The indoor unit is not level right to left. Level indoor unit. • The condensate drain pipe is restricted or plugged. All restrictions must be removed to allow continuous drainage by gravity. • If problem persists, contact a qualified service professional for assistance.
The unit will not deliver air.	**Cause:** There are a number of system functions that will prevent air flow. **Solution:** Check for the following: • In heating mode, the indoor fan may not start for three minutes if the room temperature is very low. This is to prevent blowing cold air. • In heat mode, if the outdoor temperature is low and humidity is high, the system may need to defrost for up to 10 minutes before beginning a heating cycle. • In dry mode, the indoor fan may stop for up to three minutes during the compressor off delay. • Otherwise, you should contact a qualified service professional for assistance.