YDS04U-007aW

ENGLISH

OWNER'S MANUAL

YORK INTELIGENT NETWORK AIR-CONDITIONING CENTRAL CONTROL MONITOR AMR03M

Please read this installation manual carefully before installing your air conditioner.
Please keep this manual in a safe place for future reference.
This manual many be subject to change without notice for purpose of improvement.

2. Summarize of CCM

2-1 Basic Requirements

(1) Applicable Power Voltage Range: Input Voltage 220 ~ 240VAC±10%.

(2)AC Input Power Frequency: 50Hz/60Hz.

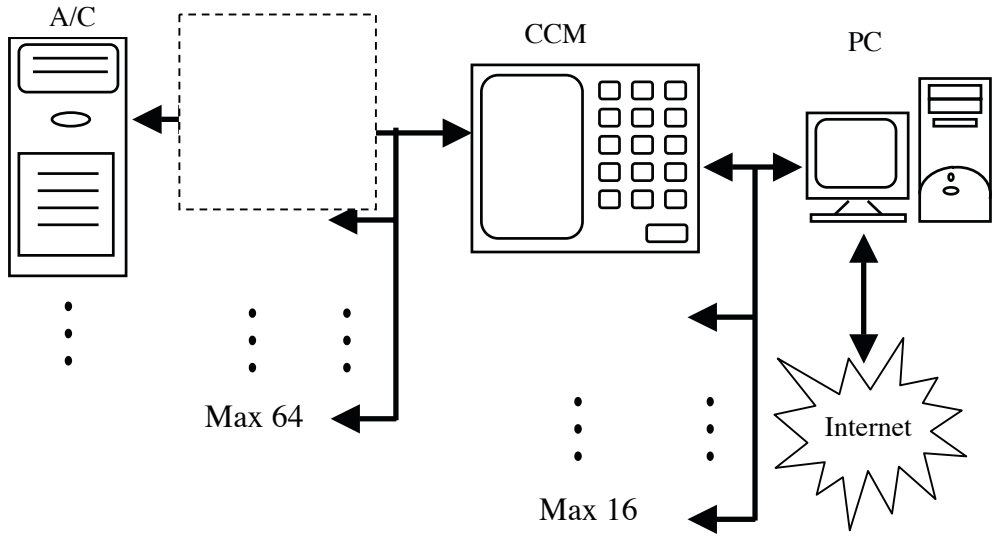
(3)Working Ambient Temp.: -10ºC ~ +43ºC.

(4)Working Ambient Humidity: RH40%~RH90%.

(5)CCM with Model YDSA-CCM01 is applicable to all models of YORK Air-conditioners.

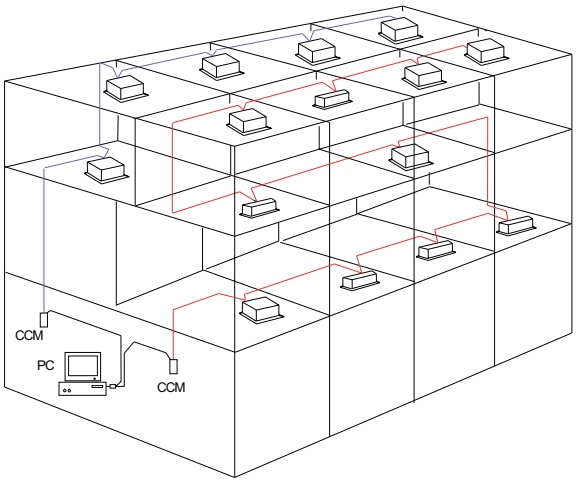
2-2 Components of Central Control Monitor System

The Central Control Monitor System consists of CCM, (NIM), Electric Control, PC and Communication Wire. Some NIM is inside the indoor PCB and needn't set separately. (Please refer to the technical information of indoor units.)



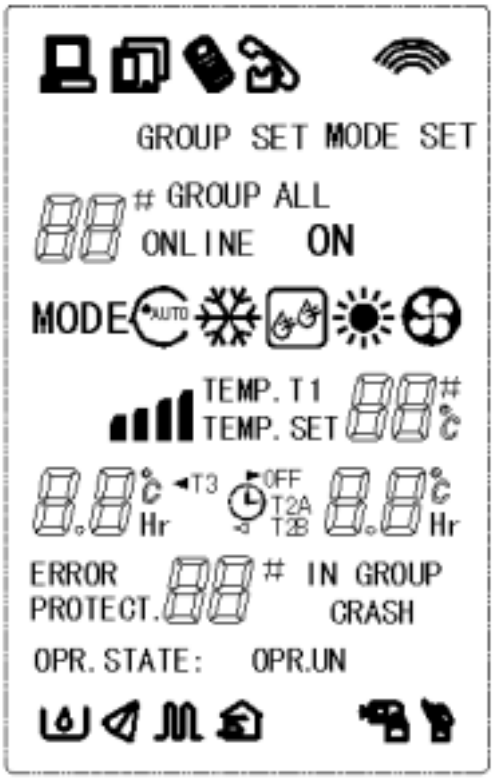
The CCM can connect up to max 64 indoor units, which together compose one LAN (Local Area Network), thus the CCM can central control to all air-conditioners in the LAN, including sending every kind of control order to every air-conditioner and setting running states of every air-conditioner. And the control signal of CCM can arrive to the farthest 500 meters, which can meet various control requirements for customers.

Through interfacing with PC or Gateway, the CCM can realize central management control, parameters setting and states query to all air-conditioners in the LAN by PC. What's more, connecting with WAN (Wide Area Network) by PC or Gateway can realize long-distance control. And every PC or Gateway can connect max. 16 CCM.



Installation Sketch Map of Network Air-condition Building

3. Name and Function of Indicators on CCM LCD Screen



1) Common Display Data

Common display data will be indicated in all display pages.

a. Figure means CCM is in network control with PC or Gateway.

b. Figure means CCM is in communication connection with Function Module.

c. Figure means CCM is in communication connection with Message Remote Control Module.

d. Figure means CCM is in communication connection with Telephone Remote Control Module.

e. If CCM is in normal communication with NIM, then (Blank), •, , will be displayed in dynamic circulation. Otherwise, no any display.

f. Lock Symbol means the CCM is in Lock state or the buttons are in Lock state. ON means the buttons are in Lock state or both CCM and Buttons are in Lock state, and 0.5 second flash means the CCM is in Lock state.

g. When setting page layout, if the selected air-conditioner is in Remote Controller Lock state (in case that several air-conditioners are in operation, if only one is in Remote Controller Lock state, then that means in Lock state.), symbol will display steadily. If in Mode Lock state, symbol will flash in 0.5Hz. If Remote Controller Lock state and

Mode Lock state exist at the same time, symbol  will display steadily.

2) Display Data Treatment

Data Display area adopts 7-segment code, and there are 5 groups of 2-digital 7-segment display.

a. **TEMP.** Display

TEMP. display is applicable to the following: Set Temp. Ts (17-30°C) , Indoor Return Air Temp. T1, Evaporator Pipe Temp. T2A, Ev aporator Middle Pipe Temp. T2B, Condenser Pipe Temp. T3. And the allowable data display range is 0°C-99°C. If higher than 99°C, then display 99°C. If lower than 0°C, then display 0°C. What's more, the real display range also has relationship with the PCB temperature checking range. If no effective data, then display "-" and Unit symbol °C will be ON.

b. **CURRENT** Display

CURRENT display is applicable to Compressor Current. The allowable range is 0A-99A. If no effective data, then display "-" and Unit symbol Amp. will be ON.

c. **TIMER** Display

TIMER is used to display the time of TIMER ON and TIMER OFF. The unit symbol Hr will be ON at the same time.

d. **ERROR** code display

ERROR is used to display malfunction warning data of the air-conditioner or the CCM. The display range of ERROR code is E0-EF, where, E means ERROR, 0-F means ERROR code, or Network ERROR display 00-0F#. If no EEROR, then display "E-" and # will be ON.

e. **PROTECT.** code display

PROTECT. is used to display malfunction warn ing data of the air-conditioner or the CCM. The display range of PROTECT. code is P0-P F, where, P means PROTECT., 0-F means PROTECT. Code. If no PROTECT., then display "P-" and # will be ON.

f. **ADDRESS** display

ADDRESS is used to display the ADDRESS code of the present selected air-conditioner. The display range is 0-63, and at the same time # will be ON.

g. **Number** Display of Online air-conditioners and **ON/OFF** air-conditioners

It is used to display the number of online air-conditioners in **LAN** and **ON/OFF** air-conditioners at present. The display range is 0-64.

h. **Auxiliary function** display

 means ECONOMIC RUNNING,  means SWING,  means Auxiliary Heater,  means VENT.

i. **Mode Confliction** Display

Function Confliction display will flash at interval 1 second.

3)**Stand-by Page** Display

Stand-by page data consist of several pages and the page number is not fixed.

Stand-by page can display the total number of air-conditioners in network, under ON state

and under OFF state. If one or more air-conditioners in network have malfunction, or the CCM checks other malfunctions, the Stand-by page will display the first ERROR Code from small to big according to the number. Other malfunctions can be queried by buttons "**+**" and "**-**". If no malfunction and one or more online air-conditioners in network are in ON state, the Stand-by page will display present main Running Mode, Set Temp. and Indoor Fan Speed. If no malfunction and all air-conditioners in network are in OFF state, ERROR Code nor Running mode will not be displayed.

4) **Query Page** Display

Query Page data consist of several pages and the page number is not fixed.

a. When first entering into Query Page Display, the address of the first online air-conditioner will be selected in default and the data of the first page will be displayed.

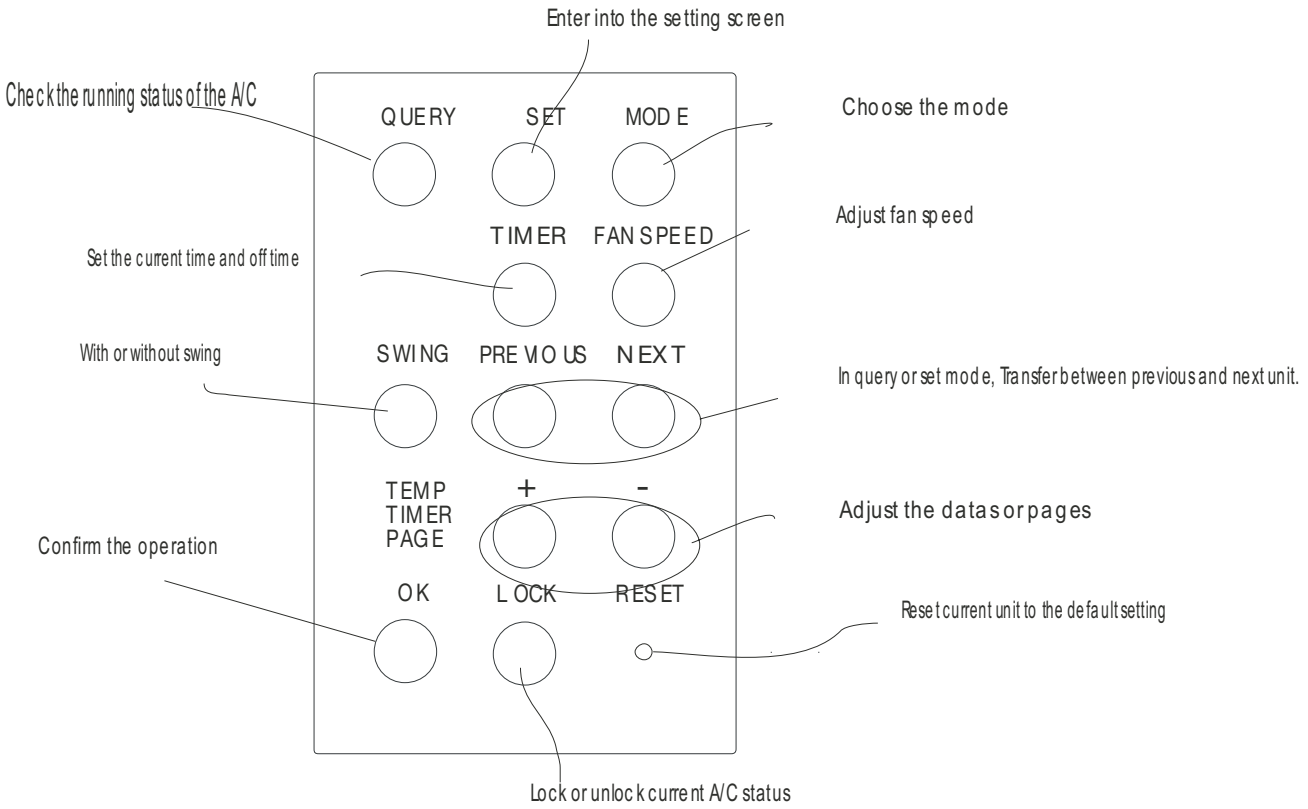
b. The data of other pages can be displayed in circulation by pressing buttons "+" or "-".

c. The running state data of different air-conditioners can be queried by pressing "Previous" or "Next" to select the address.

5) **Running Mode Setting Page** Display

Running Mode Setting Display only has one page. And display the selected mode, auxiliary function and the selected operation state.

4. Name and Function of Buttons on CCM



ON/OFF Button: Pressing ON/OFF Button at any time, all present online air-conditioners in CCM network will be ON/OFF.

5. Operation and Performance of CCM

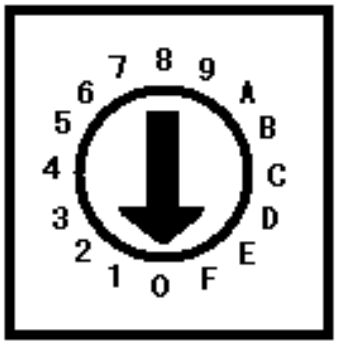
Before operating CCM, please first confirm the wiring of CCM, NIM, address setting of CCM and the setup of the PC A/C Monitor Soft are in right state.

5-1 First Power On, Address Setting and State Display

5-1-1 Display when First Power On or Restore

After the CCM is power on or restore, first all display segment on LCD will be on and last 2 seconds, then all will be off. 1 second later, the system enters into normal display state, the CCM is in the main page and display the data in the first page. When first power on, it only can operate the buttons after 10 seconds.

5-1-2 Network Area Address Setting



The PC or gateway can connect max. 16 sets CCM. Every CCM can be viewed as one network area and be distinguished by dialing setting. The setting range is 0-15 (0-F) .

5-1-3 Indicator Display

If there is button to set the running state of air-conditioner, the indicator lamp will be on when sending signal and will be off after finishing setting.

If the online air-conditioner in network has malfunction, or the CCM network itself has malfunction, the indicator lamp will flash in 2Hz.

If one or more online air-conditioners in network are in running state, including Timer On/Timer Off setting running, the indicator lamp will be on. Otherwise, the indicator lamp will be off.

5-2 Basic Function

5-2-1 Network Control Function

The CCM can control and adjust the states, parameters and ON/OFF of one or all indoor units in network.

5-2-2 Lock Function of CCM and Remote Controller

When receiving CCM Lock order from PC, the CCM will not allow ON/OFF operation and Mode Setting operation. At the same time, PC will send order of Remote Control Lock to all air-conditioners in CCM network. When receiving Unlock order from PC, ON/OFF operation will be carried out by CCM. At the same time, PC will send order to relieve the Remote Control Lock of all air-conditioners.

Remote Control Lock: it can be Locked or Unlocked by PC separately, or it can be Locked or Unlocked by the Lock button of CCM. When pressing Lock button of CCM, for one or more indoor units, if the prior state is Lock, then Unlock; if the prior state is not Lock, then Lock.

5-2-3 Mode Lock Function

When receiving Mode Lock from PC to operate ON/OFF, first send the order to air-conditioners, and the CCM allow to select ON operation method of Locked Mode without confliction. After receiving order of relieving Mode Lock, it can freely select ON operation method.

5-2-4 Urgent Stop and Forced ON

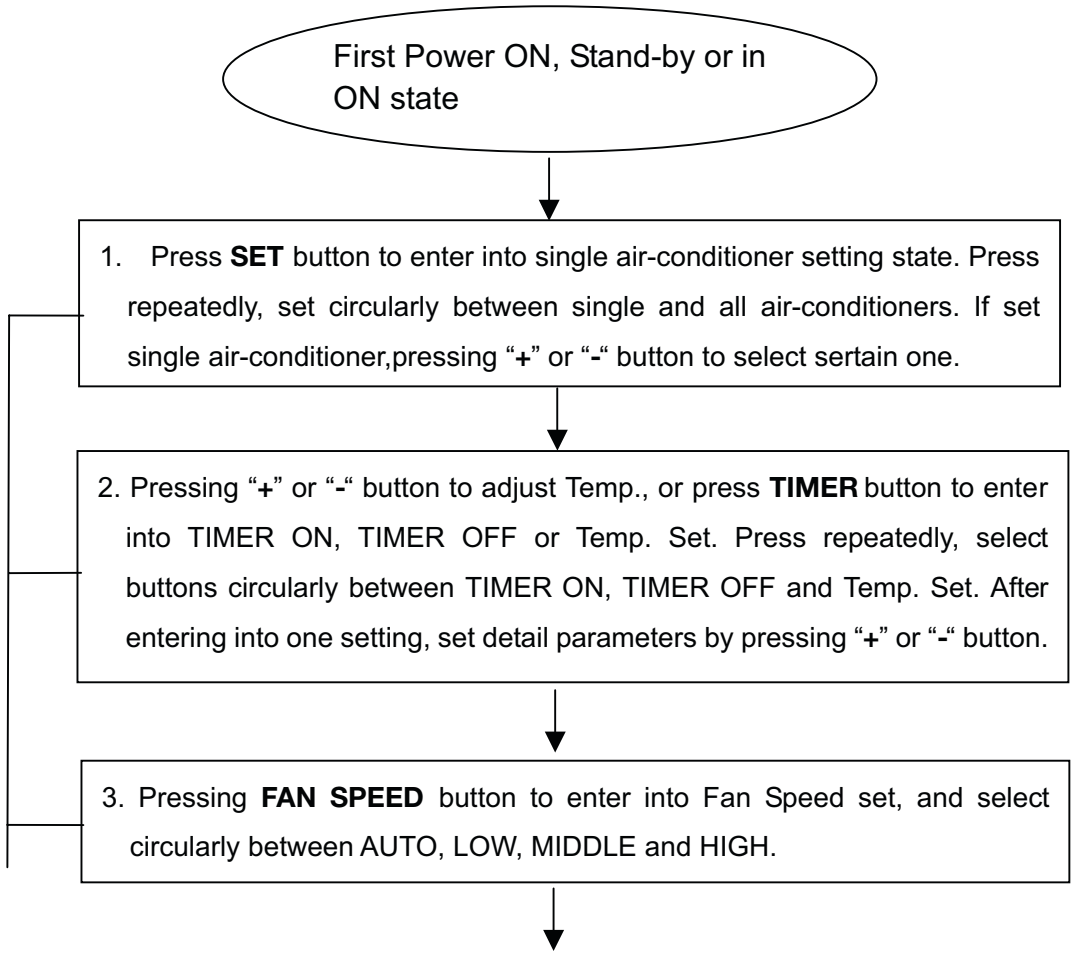
When the Urgent Stop switch of CCM (CN3 on Power Board) is closed, all air-conditioners in CCM network will be forced OFF, and ON/OFF operation will be forbidden by CCM, PC and all function modules until the switch is open.

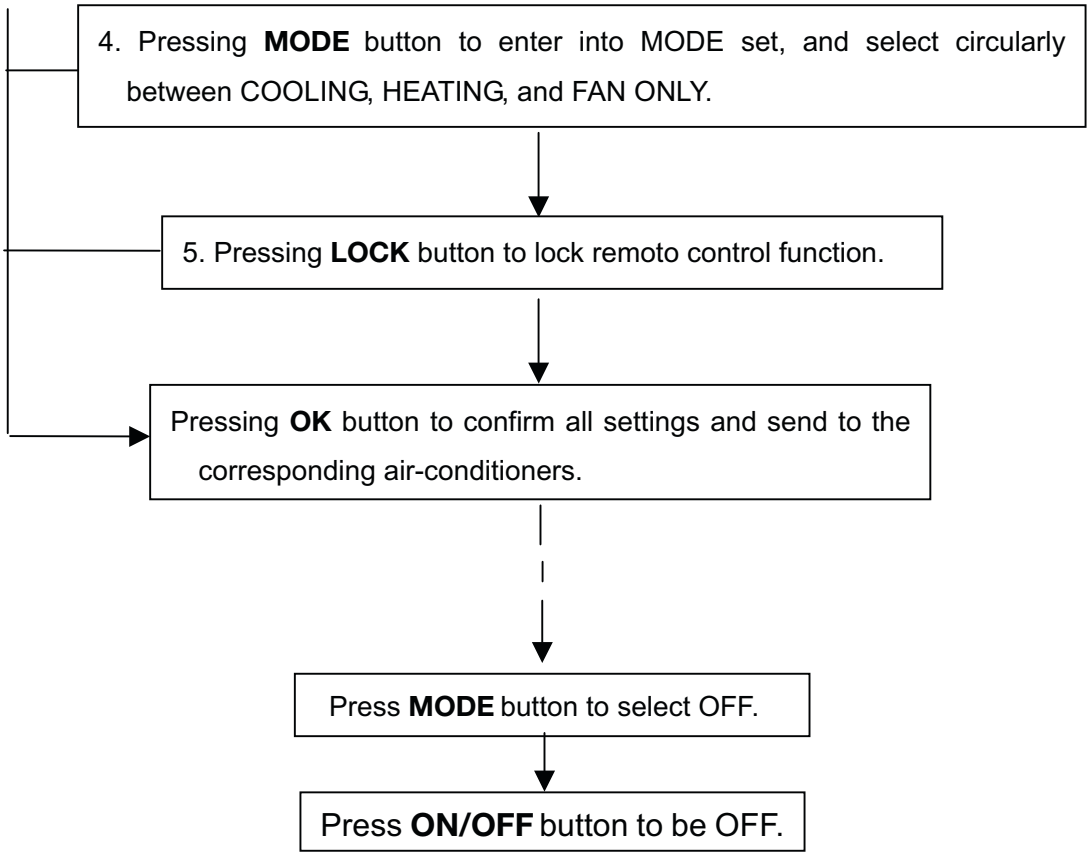
When the Forced ON switch of CCM (CN2 on Power Board) is closed, all air-conditioners in CCM network will be forced ON and in cooling operation in default, and ON/OFF operation will be forbidden by CCM, PC and all function modules until the switch is open. (CCM, PC and function modules only send ON order to air-conditioners, not effect operation by remote controller.)

If both are closed at the same time, Urgent Stop switch takes priority.

5-3 ON/OFF Operation

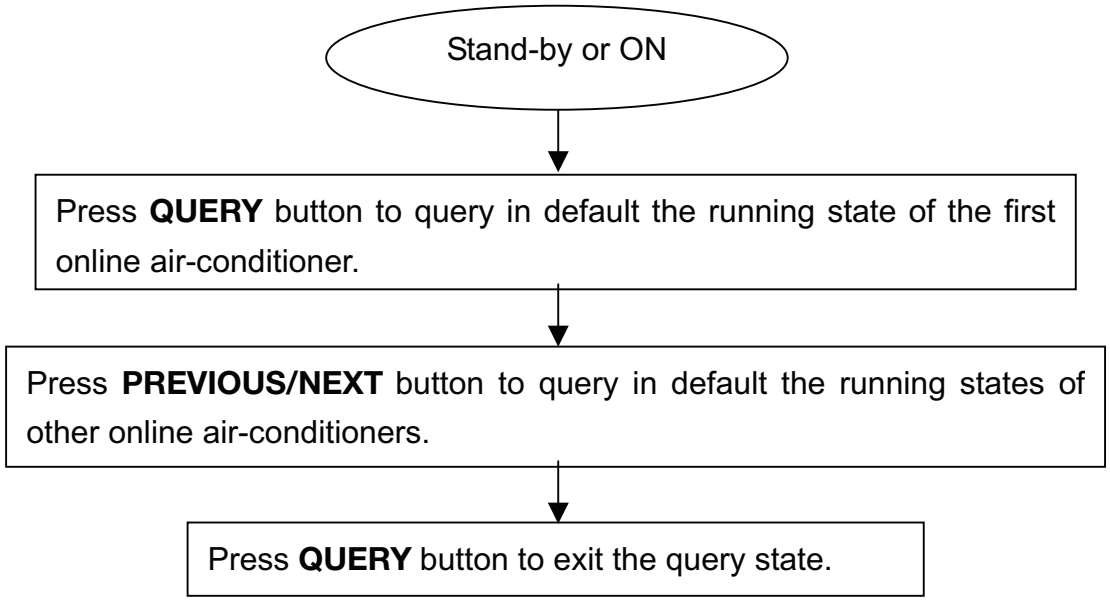
At any time, all online air-conditioners in CCM network will be carried out ON/OFF operation by directly pressing ON/OFF button. If some or all air-conditioners need to be carried out ON operation after Mode Setting, Parameter Setting and so on, please refer to the following procedure:



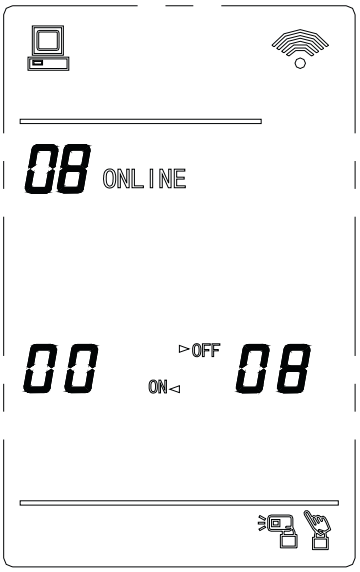


In above procedure, the step 1, 2, 3, 4,5 can be carried out separately and needn't be done in turn. After setting one step, press **OK** button; then set next step and press **OK** button. It can also set all or only set one step, then press **OK** button.
In case of non-set page, press **SET** button or **MODE** button to enter into Set Page.

5-4 Query Operation

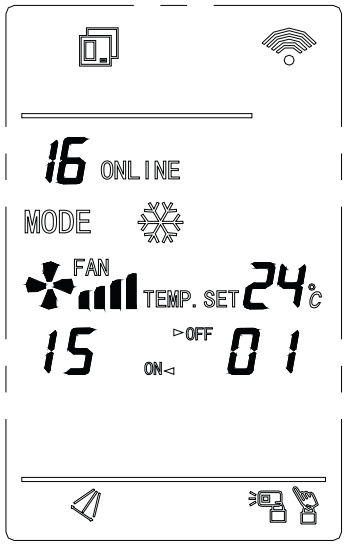


5-6 Display Example



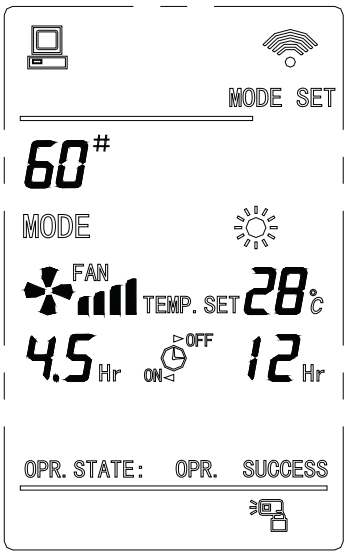
Stand-by state**:**

In communication with **PC**, 8 indoor units online are in Stand-by state.



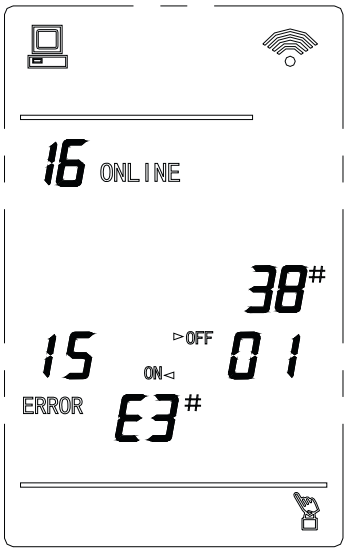
ON state**:**

In communication with **CCM**, among 16 indoor units online,15 indoor units are starting or running in Cooling mode**,** High Fan Speed, Set Temp. 24ºC. I indoor unit is OFF.



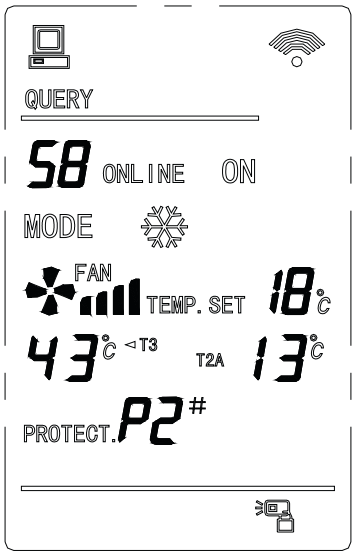
MODE SET state**:**

In communication with **PC**, NO.60 indoor unit in network is in Heating mode, Set Temp. 28ºC, Middle Fan Speed, 4.5 hours Timer-On,12 hours Timer-Off.



ON and **ERROR** **:**

In communication with **PC**, among 16 indoor units online,15 indoor units are starting or running. NO.38 indoor unit is in **ERROR.** (E3).



QUERY state**:**

In communication with **PC**,58 indoor units online are ON in Cooling mode**,** Set Temp. 18ºC, High Fan Speed, T3 (43ºC) and T2A(13ºC). NO. 39 indoor unit is in PROTECT.(P2).

5-6 Operation Precaution

a. **MODE** button: when operating single unit with cooling only type, it can't select Heating mode. When controlling all, if only there is one heat-pump unit, then it can select Heating mode. But if there are other units with cooling only type among the selected units, then function confliction will be pointed out, but mode setting operation will not be limited.

b. If the set time is 0, then it means no TIMER operation. When first entering to TIMER operation, the default time is 0, that is, no timer.

c. VENT. Auxiliary function is selected to start or close only by Auxiliary Function Button. If there is only one unit that supports the selected auxiliary function, then this function can start. Or, it can't start. If there is only one unit that doesn't support the selected started auxiliary function, then function confliction will be pointed out, but mode setting operation will not be limited.

d. When first entering into the setting page, it thinks single unit in default. If the air-conditioners are in OFF state, then they will start according to COOLING mode, Set Temp. 24ºC, HIGH fan speed, no TIMER and SWING function in default.

e. At any time, if pressing **ON/OFF** button, all present online air-conditioners will be carried out ON/OFF operation. If only one online air-conditioner is in ON state, including ON/OFF setting by delay, after pressing **ON/OFF** button, all online air-conditioners will be off. If all present online air-conditioners are in OFF state, then it will send ON order as follows: if pressing at Mode Setting Page, then it will carry out ON operation according to the present selected Mode, Fan Speed, Set Temp., Timer and Auxiliary Function; if pressing at other time and no selected Mode Setting data, then it will carry out ON operation according to COOLING mode, Set Temp. 24ºC, HIGH fan speed, no TIMER and SWING function in default.

5-7 Communicate with NIM

The CCM and NIM adopt main-auxiliary responsion communication. At any time, continuously query the running state of one air-conditioner in network 10 times, if not receiving the feedback data, then it thinks this air-conditioner is power off or doesn't exist, and no malfunction warning occurs. If receiving the feedback data, but the communication data is wrong, then it thinks communication malfunction exists between CCM and NIM, and malfunction code "**01#**" will be displayed. After normal communication, malfunction will relieve. Or malfunction code will be eliminated after judging the air-conditioner is power off or doesn't exist.

5-8Communicate with Epigyny PC

If receiving data from Epigyny PC, then enter into network control state. If not receiving data from Epigyny PC for 1 minute, then exit network control state. If data communication has frame mistake or data check has mistake, CCM/PC communication malfunction will occur and display malfunction code "**03#**". Malfunction will relieve after communication restores to normal state or exiting network control state.

5-9 Data Communicate with other Function Modules

If receiving data from function module, then display the network information of the corresponding function module. If not receiving data from corresponding function module for 1 minute, then exit network control state. If data communication has frame mistake or data check has mistake, CCM/PC communication malfunction will occur and display malfunction code “02#”. Malfunction will relieve after communication restores to normal state or exiting network control state.

6. Malfunction and Protection Code Table

ERROR Code	ERROR Contents	PROTECT. Code	PROTECT. Contents
EF	Other malfunction	PF	Other Protection
EE	Water level checking malfunction	PE	Reserve
ED	Outdoor protection	PD	Reserve
EC	Clear malfunction	PC	Reserve
EB	Inverter Module Protection	PB	Reserve
EA	Compressor Over-current (4 times)	PA	Reserve
E9	Communication malfunction between PCB and Display board	P9	Reserve
E8	Fan motor checking out of control	P8	Compressor Over-current
E7	EEPROM malfunction	P7	Power Lack/Over Volt Protection
E6	Over-zero checking malfunction	P6	Discharge Low-pressure Protection
E5	T3 sensor malfunction	P5	Discharge High-pressure Protection
E4	T2B sensor malfunction	P4	Discharge Pipe Temp. Protection
E3	T2A sensor malfunction	P3	Compressor Temp. Protection
E2	T1 sensor malfunction	P2	Condenser High Temp. Protection
E1	Communication malfunction	P1	Anti-cooling or Defrost Protection
E0	Phase sequence or lack of phase	P0	Evaporator Temp. Protection
03#	CCM/PC(gateway) Communication Malfunction		
02#	CCM/Function Module Communication Malfunction		
01#	CCM/NIM Communication Malfunction		
00#	CCM/PCB Communication Malfunction		

7. Technical Index and Requirement

EMC and EMI should conform to the requirement of CE Certification.

DE - COMMISSIONING DISMANTLING & DISPOSAL

This product contains refrigerant under pressure, rotating parts, and electrical connections which may be a danger and cause injury!

All work must only be carried out by competent persons using suitable protective clothing and safety precautions.

Read the Manual

Risk of electric shock

Unit is remotely controlled and may start without warning

1. Isolate all sources of electrical supply to the unit including any control system supplies switched by the unit. Ensure that all points of electrical and gas isolation are secured in the OFF position. The supply cables and gas pipework may then be disconnected and removed. For points of connection refer to unit installation instructions.
2. Remove all refrigerant from each system of the unit into a suitable container using a refrigerant reclaim or recovery unit. This refrigerant may then be re-used, if appropriate, or returned to the manufacturer for disposal **Under No circumstances should refrigerant be vented to atmosphere.** Where appropriate, drain the refrigerant oil from each system into a suitable container and dispose of according to local laws and regulations governing disposal of oily wastes.
3. Packaged unit can generally be removed in one piece after disconnection as above. Any fixing down bolts should be removed and then unit lifted from position using the points provided and equipment of adequate lifting capacity. Reference MUST be made to the unit installation instructions for unit weight and correct methods of lifting. Note that any residual or spilt refrigerant oil should be mopped up and disposed of as described above.
4. After removal from position the unit parts may be disposed of according to local laws and regulations.

Johnson Controls