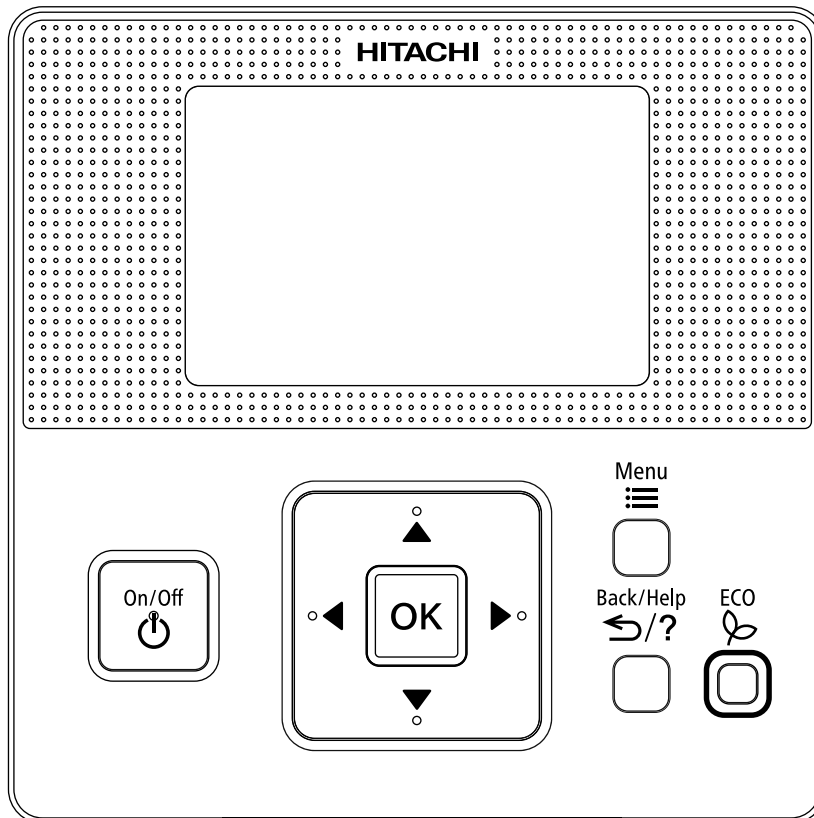


HITACHI

WIRED REMOTE CONTROLLER SERVICE MENU & SELF CHECKING MANUAL

MODEL
SPX-WKT2



CONTENS

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1. SERVICE MENU OPERATION



1.1 SERVICE MENU

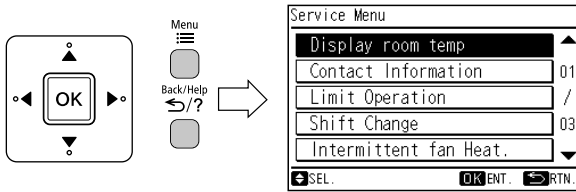
Various setting functions are displayed in the service menu. This procedure shall be implemented strictly by service personnel only. Refer to the following sections for each function.


NOTE:

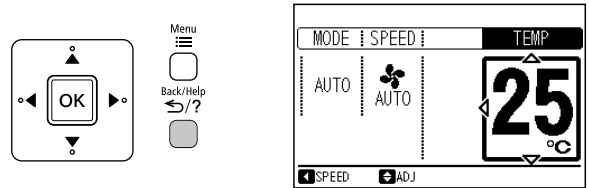
☒ : Unable to set

If the function with " ☒ " is selected from the menu, "Setting Disabled" will be displayed on the lower screen.

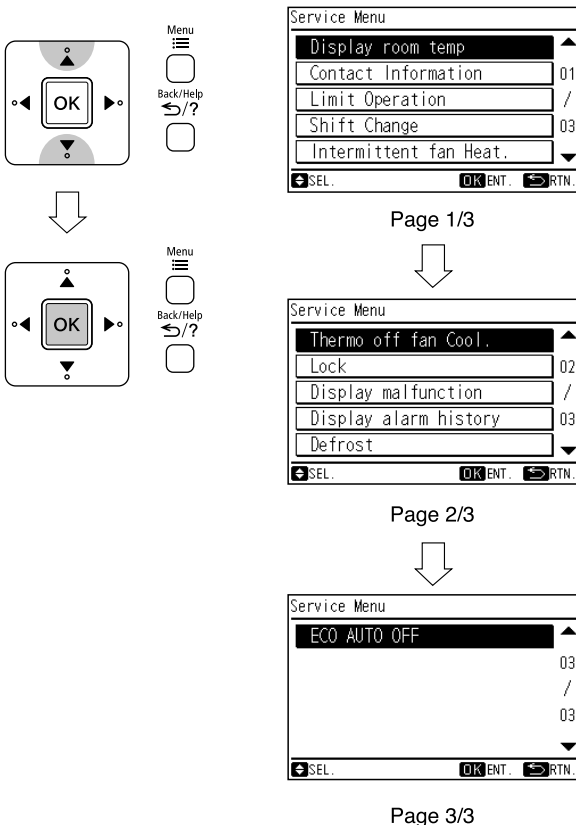
- 1 Press and hold  and  simultaneously for at least 3 seconds during the normal mode. The service menu will be displayed.



- 3 Press "  " (return/help) to return to the normal mode.



- 2 Select the "Service Menu" function by pressing "△" or "▽" and press "OK". (" ☒ " will be displayed if the function is not available.)



NOTE:

- If the menu screen remains unchanged for approximately 2 hours, the screen will automatically return to the normal mode.

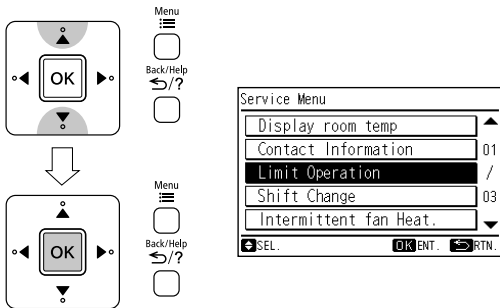
NOTE:

- The "Service Menu" functions vary depending on which is displayed in the stop and in operation, or model-wise.

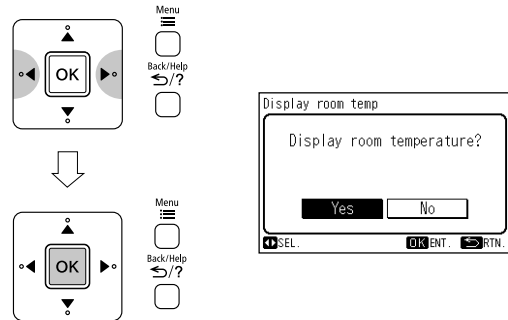
1.2 DISPLAY ROOM TEMPERATURE

Room temperature(around remote controller) can be displayed.

- 1 Select "Display room temp" from the service menu and press "OK".
The confirmation screen will be displayed.



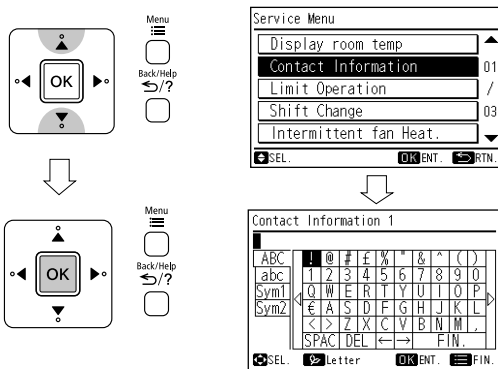
- 2 Select "Yes" by pressing "<" or ">" and press "OK". The setting will be confirmed and the screen will return to the normal mode.




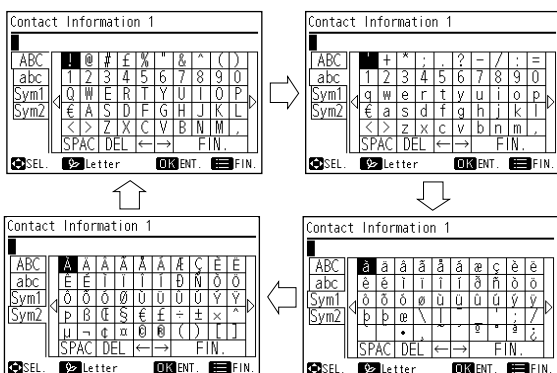
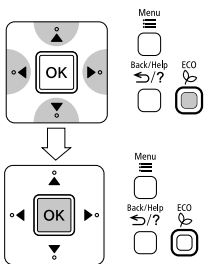
1.3 CONTACT INFORMATION REGISTRATION


Contact information can be registered from "Contact information".

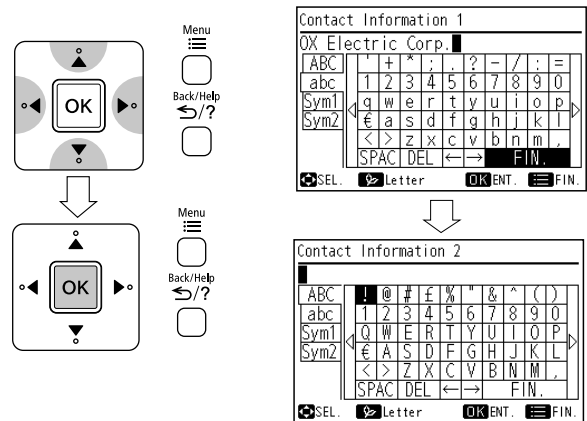
- 1 Select "Contact information" from the service menu and press "OK". The contact information 1 will be displayed.




- 2 Press  to change font type.
- 3 Press "△▽◀▶" to select letter.
- 4 Press "OK" to confirm the letter. (Max.: 28 letters)



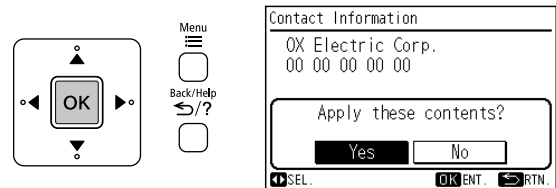
- 5 Select "FIN." and press "OK" (or simply press ). "Contact information 2" will be displayed.



- 6 Repeat (3)-(5) to register the contact information 2.

Select "FIN." and press "OK", the confirmation screen will be displayed.
(Also press  and the confirmation screen will be displayed.)

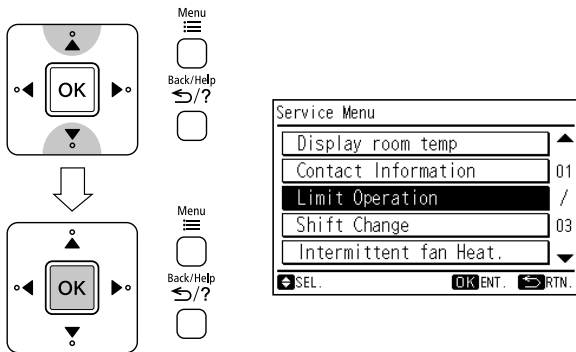
- 7 Select "Yes" and press "OK". The service menu will be displayed after setting is confirmed. If "No" is pressed, the screen will return to (3).



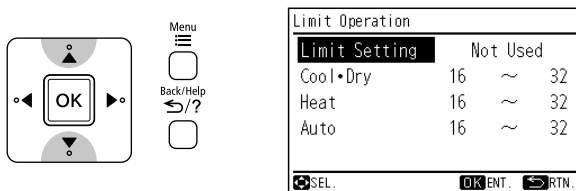
1.4 LIMIT OPERATION

Setting temperature range can be changed.

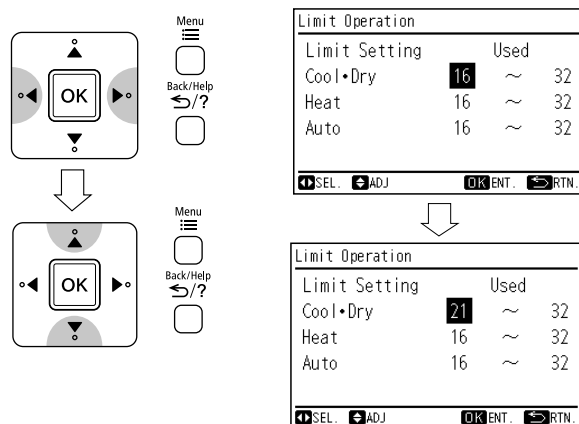
- 1 Select "Limit Operation" from the service menu and press "OK".
The limit operation setting will be displayed.



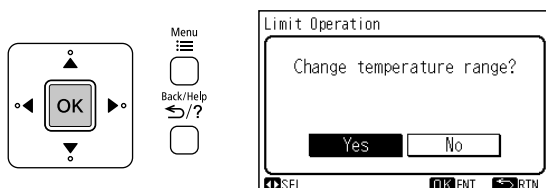
- 2 Press "△" or "▽" to select the setting items. The setting items are displayed "Limit Setting", "Cool-Dry", "Heat" and "Auto".



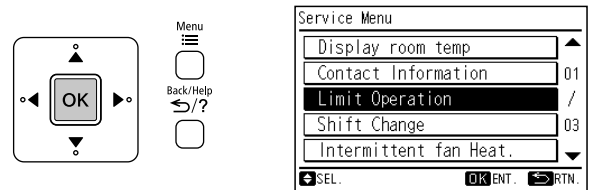
- 3 Press "◀" or "▶" to set each setting content for the selected item. When "Limit Setting" is selected, the setting contents are switched in order of "Not Used" ↔ "Used" by pressing "△" or "▽". When "Cool-Dry" or "Heat" or "Auto" is selected, the setting temperature (lower limit or upper limit) can be set every 1 degree by pressing "△" or "▽".



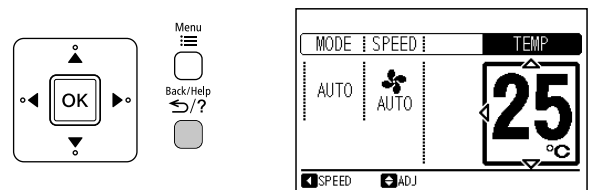
- 4 Press "OK" to finish the limit operation setting. The confirmation screen will be displayed.



- 5 Select "Yes" by pressing "◀" or "▶" and press "OK".
The setting will be confirmed and the screen will return to the service menu.



- 6 Press "Back/Help" (return/help) to return to the normal mode.



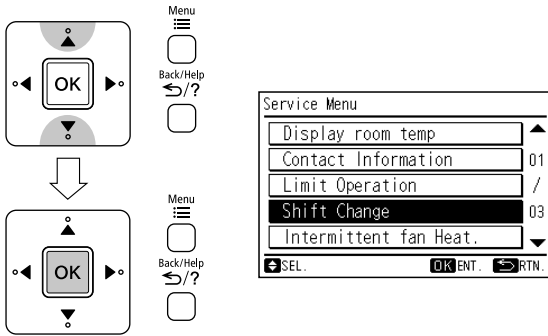
NOTE:

- The limit operation setting will remain unchanged after the unit is turned off.

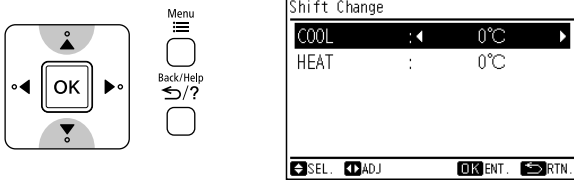
1.5 SHIFT CHANGE

The shift value setting temperature for cooling and heating mode operation can be changed.

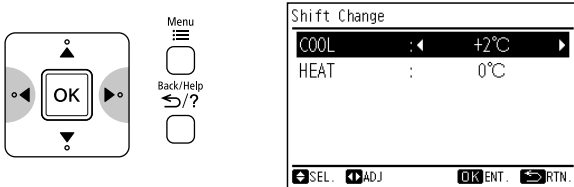
- 1 Select "Shift Change" from the service menu and press "OK". The shift change setting will be displayed.



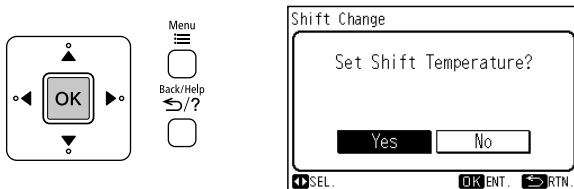
- 2 Press "△" or "▽" to select the operation mode. ("COOL" or "HEAT")



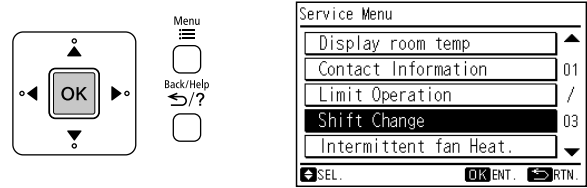
- 3 By pressing "◀" or "▶", the shift value will be changed as below.
 "...+3°C ↔ -3°C ↔ -2°C ↔ -1°C ↔ 0°C
 ↔ +1°C ↔ +2°C ↔ +3°C ↔ -3°C..."



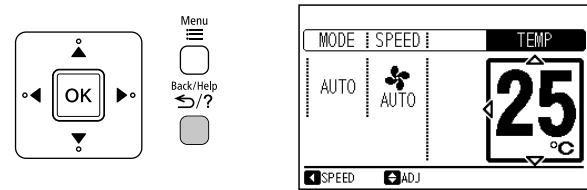
- 4 Press "OK" to finish the shift value setting. The confirmation screen will be displayed.



- 5 Select "Yes" by pressing "◀" or "▶" and press "OK". The setting will be confirmed and the screen will return to the service menu.



- 6 Press "Back/Help" (return/help) to return to the normal mode.



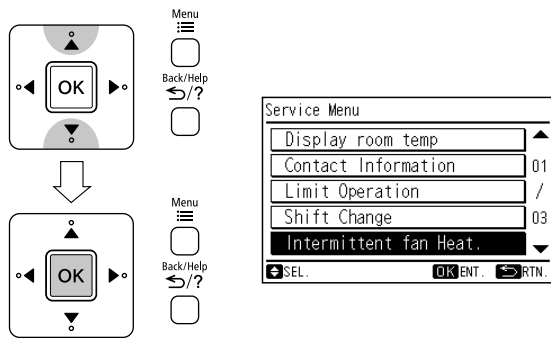
NOTE:

- This setting cannot use during operation.
- The shift change setting will remain unchanged after the unit is turned off.

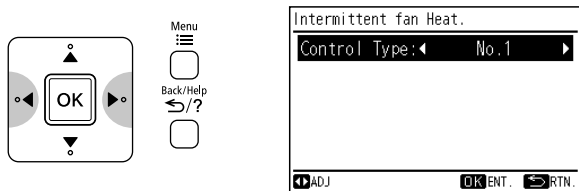
1.6 INTERMITTENT FAN CONTROL

The intermittent fan control during thermo off in Heating mode mode can be changed.

- 1 Select "Intermittent fan Heat." from the service menu and press "OK".
The intermittent fan control setting will be displayed.

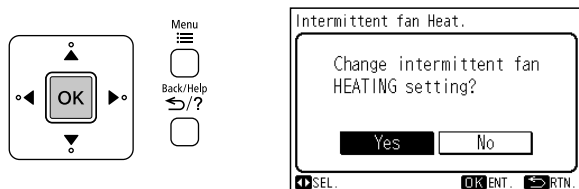


- 2 By pressing "<" or ">", the "Control Type" will be changed as below.
"... No.1 ↔ No.2 ↔ No.3 ↔ No.1 ..."

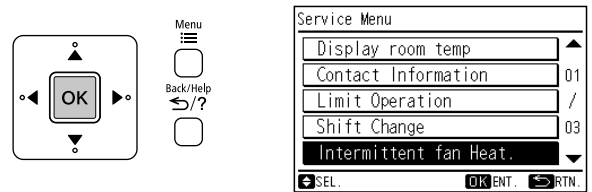


	Single model	Multi model
No. 1	Continuous	30 sec ON/210 sec OFF repeatedly
No. 2	30 sec ON/210 sec OFF repeatedly	50 sec ON/190 sec OFF repeatedly
No. 3	50 sec ON/190 sec OFF repeatedly	Continuous

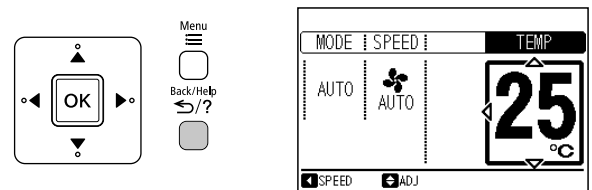
- 3 Press "OK" to finish the intermittent fan control setting. The confirmation screen will be displayed.



- 4 Select "Yes" by pressing "<" or ">" and press "OK".
The setting will be confirmed and the screen will return to the service menu.



- 5 Press "Back/Help" (return/help) to return to the normal mode.



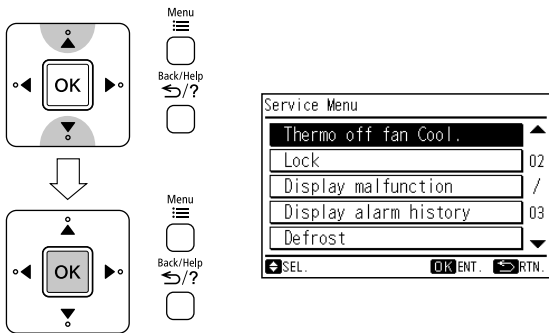
NOTE:

- This setting cannot use during operation.
- The intermittent fan control setting will remain unchanged after the unit is turned off.

1.7 FAN SPEED DURING THERMO OFF

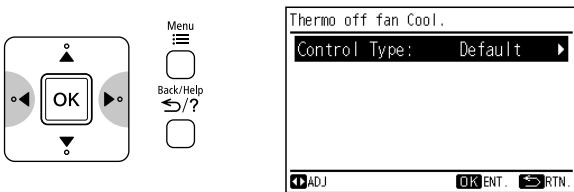
The fan speed during thermo off in Cooling mode can be changed.

- 1 Select "Thermo off fan Cool." from the service menu and press "OK".
The fan speed during thermo off setting will be displayed.

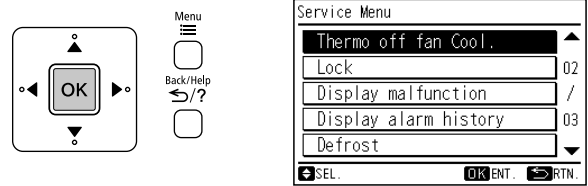


- 2 By pressing "<" or ">", the "Control Type" will be changed as below.

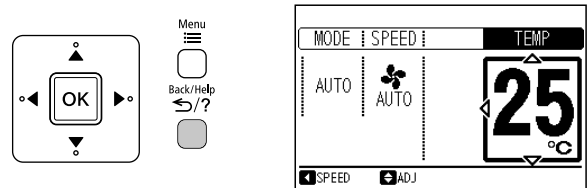
"Default" ↔ "Changed"



- 4 Select "Yes" by pressing "<" or ">" and press "OK".
The setting will be confirmed and the screen will return to the service menu.



- 5 Press "Back/Help" (return/help) to return to the normal mode.

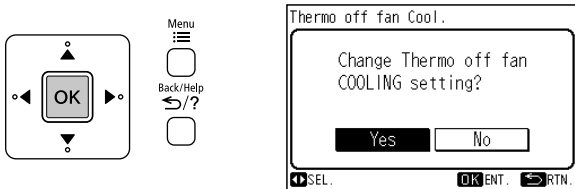


NOTE:

- This setting cannot use during operation.
- The fan speed during thermo off setting will remain unchanged after the unit is turned off.

	Fan speed during thermo off
Default	Ultra low
Changed	Set fan speed (When auto fan is set, the fan speed is low.)

- 3 Press "OK" to finish the thermo off fan control setting. The confirmation screen will be displayed.

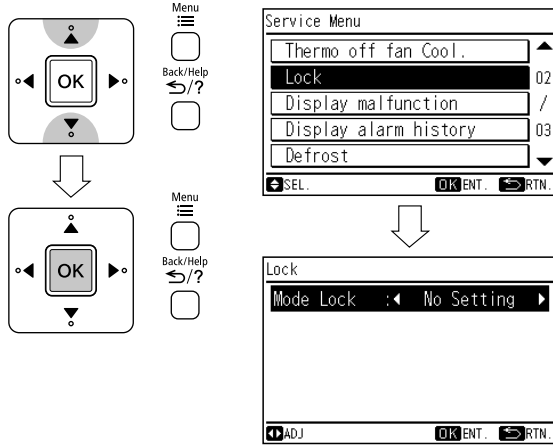


1.8 OPERATION LOCK

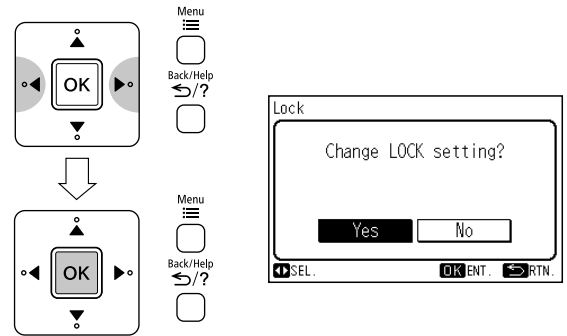
This function is used to lock the operation mode from the remote controller.

The remote controller can be set to fix the "Heating" mode (including "Fan"), "Cooling" mode and "Dehumidifying" mode (including "Fan") operations.

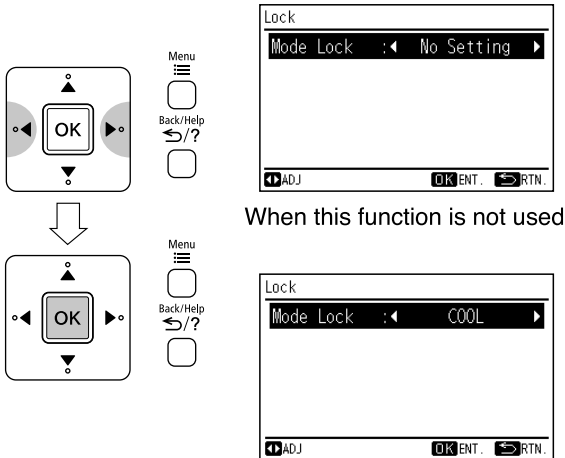
- When unit is OFF, select "Lock" from the service menu and press "OK".
The screen of "Mode Lock" selection will be displayed.



- Select "Yes" by pressing "<" or ">" and press "OK".
The setting will be confirmed and the screen will return to the service menu.

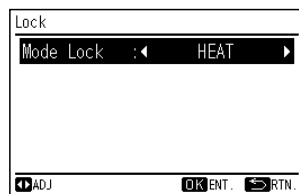


- By repeatedly pressing "<" or ">", the indication is changed in order of "No Setting" <-> "COOL" <-> "HEAT".
Select the function target and press "OK".
The confirmation screen will be displayed.



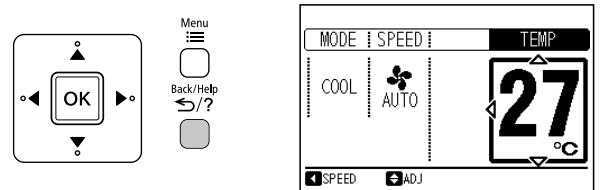
When this function is not used

When "Cooling" mode lock is selected



When "Heating" mode lock is selected

- Press "Back/Help" (return/help) to return to the normal mode.



ex. Select "Cooling" mode lock

NOTE:

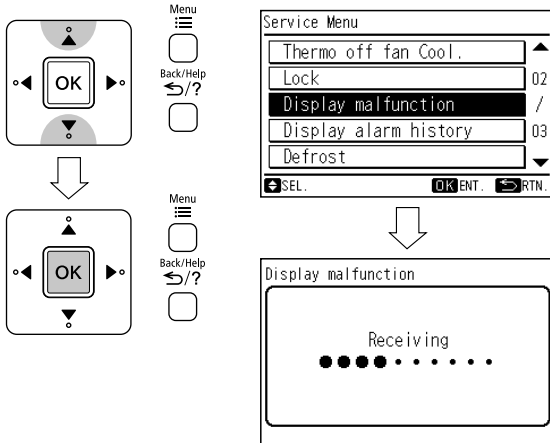
- The operation lock setting will remain unchanged after the unit is turned off.

1.9 DISPLAY MALFUNCTION

Failure modes are stored in the nonvolatile memory of indoor unit and shall be redisplayed by this remote controller. This function is useful in checking the failure modes either during switching OFF the power or restarting the device without checking the error code on display or number of indication lamp blinking. The remote controller can redisplay up to last 5 failure modes from the memory. Thus, for some failure modes which are unable to retrieve because of remote controller limit to redisplay only 5 failure modes, it can be found by cleaning up the memory first then recheck the memory content again during the visit at the customer place.

1.9.1 How to redisplay failure diagnosis

- 1 Turn the circuit breaker OFF.
- 2 Then turn the circuit breaker ON.
- 3 To enter the service menu.
- 4 Select "Display malfunction" from the service menu and press "OK".



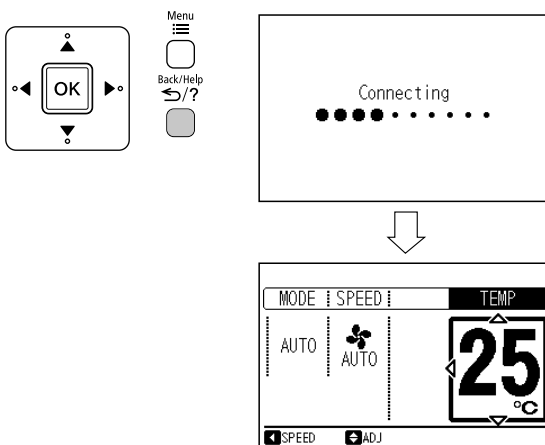
- 5 The last 5 failure modes from the memory will be displayed.

Display malfunction		
Unit	Code	
Last IN	010	
IN	010	
IN	010	
IN	009	
IN	009	

NOTE:

- During display, the timer lamp of indoor unit will blink at the last failure mode.

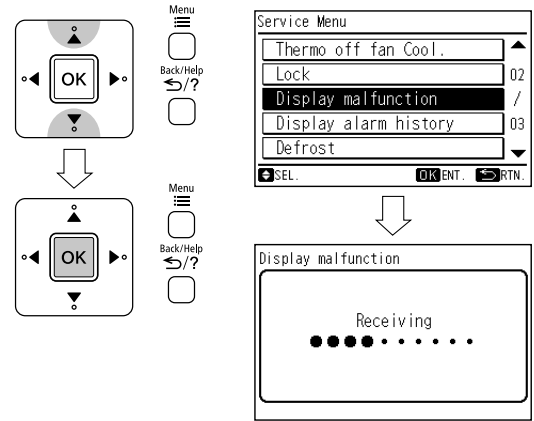
- 6 Press "Back/Help" (return/help) to return to the normal mode.



1.9.2 How to clear the failure diagnosis data

- 1 Redisplay the failure diagnosis data.
- 2 To enter the service menu.

- 3 Select "Display malfunction" from the service menu and press "OK".



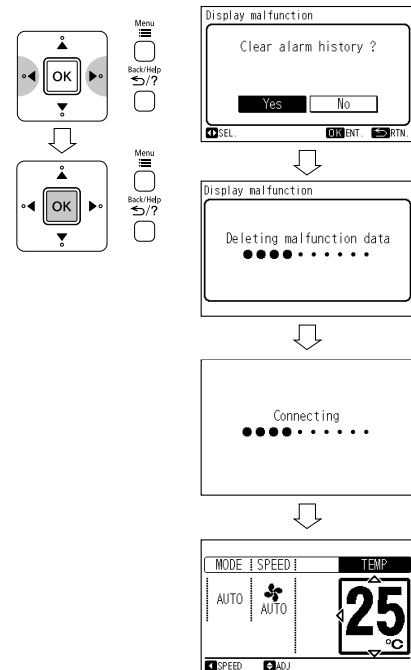
- 4 The last 5 failure modes from the memory will be displayed. "OK DeIAII" is displayed in this time.

Display malfunction		
Unit	Code	
Last IN	010	
IN	010	
IN	010	
IN	009	
IN	009	

Turned on

- 5 Press "OK". The confirmation screen is displayed. Select "Yes" by pressing "<" or ">" and press "OK".

When the failure diagnosis data is cleared, the screen will automatically return to the normal mode.



NOTE:

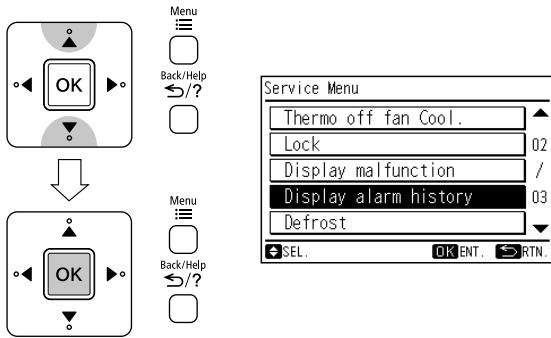
- The clear mode is valid only once after section "1.9.1".

1.10 DISPLAY ALARM HISTORY

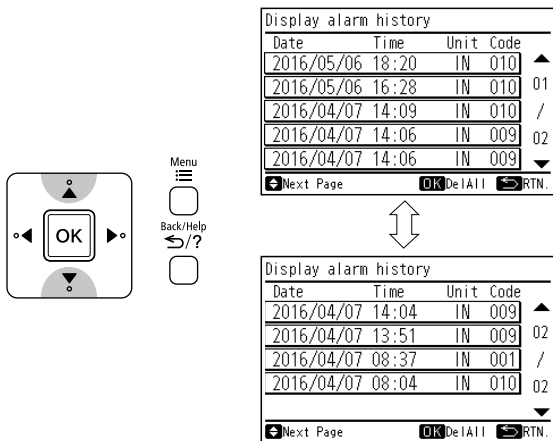
The history of failure modes are also stored in the nonvolatile memory of this remote controller. This function is useful for when a failure to check whether or not occurred. (Time and date is also indicated.)
The remote controller can memorize to last 10 failure modes in the memory.

1.10.1 How to display alarm history

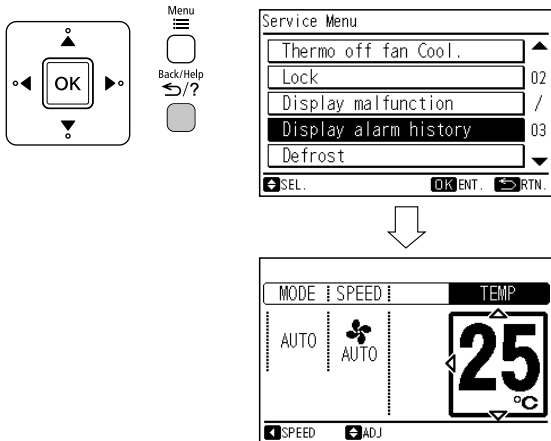
- 1 To enter the service menu.
- 2 Select "Display alarm history" from the service menu and press "OK".



- 3 The last 10 failure modes (up to 5 failure modes per one screen) in the memory will be displayed. By pressing "△" or "▽", scroll page.

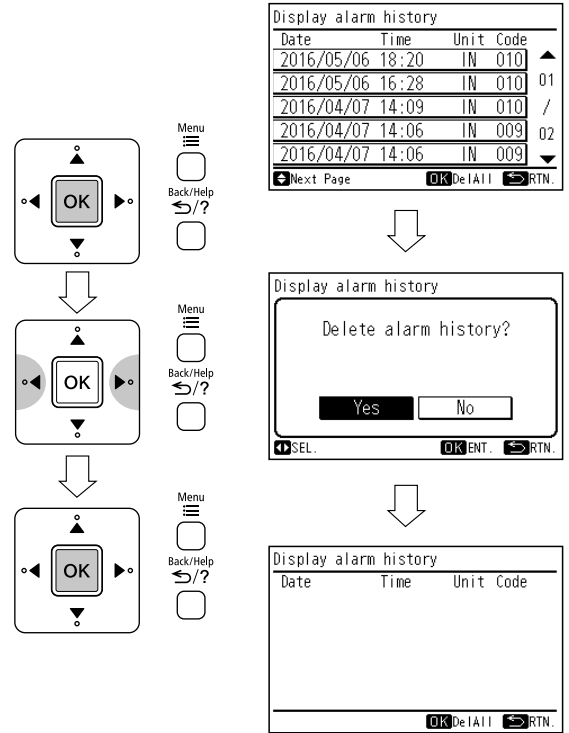


- 4 Press "Back/Help" (return/help) twice to return to the normal mode.

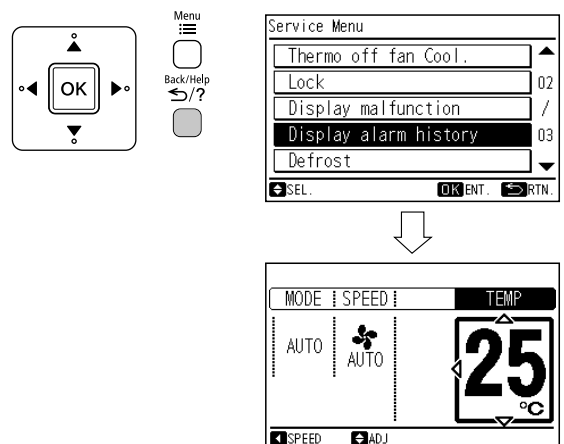


1.10.2 How to clear the alarm history

- 1 Redisplay the alarm history. (Refer to section "1.10.1")
- 2 Press "OK". The confirmation screen is displayed. Select "Yes" by pressing "<" or ">" and press "OK".



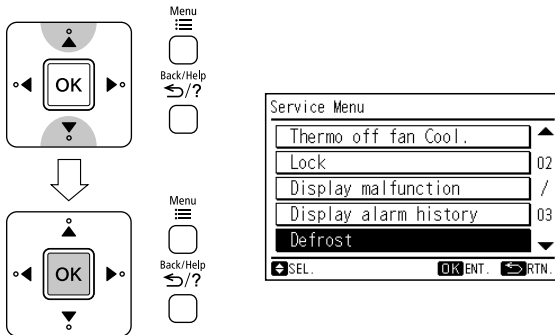
- 3 Press "Back/Help" (return/help) twice to return to the normal



1.11 DEFROSTING INHIBIT PERIOD SELECTION

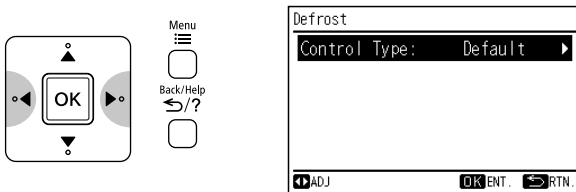
The defrosting inhibit period selection can be changed. This selection is valid with the single model only.

- 1 Turn the circuit breaker OFF.
- 2 Then turn the circuit breaker ON.
- 3 To enter the service menu.
- 4 Select "Defrost" from the service menu and press "OK".



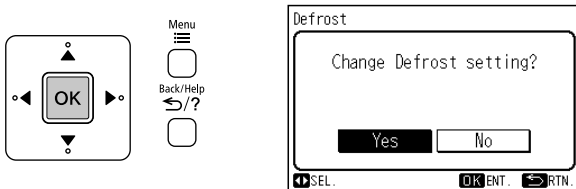
- 5 By pressing "<" or ">", the "Control Type" will be changed as below.

"Default" ↔ "Changed"



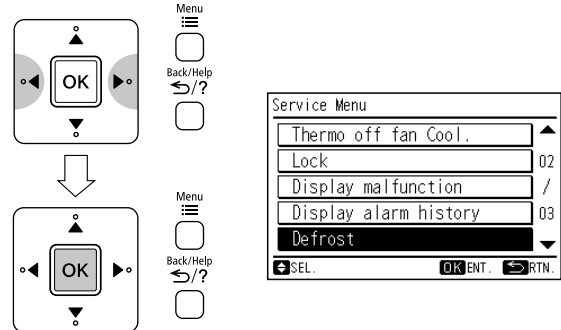
	Defrosting inhibit period
Default	Average area setting
Changed	Cold area setting (Average area setting period - 15 minutes)

- 6 Press "OK" to finish the defrosting inhibit period selection setting. The confirmation screen will be displayed.

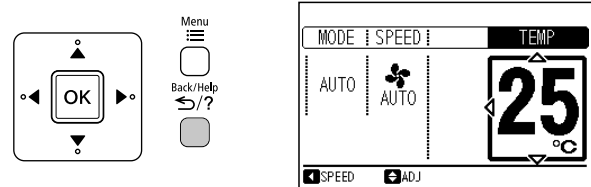


- 7 Select "Yes" by pressing "<" or ">" and press "OK".

The setting will be confirmed and the screen will return to the service menu.



- 8 Press "Back/Help" (return/help) to return to the normal mode.



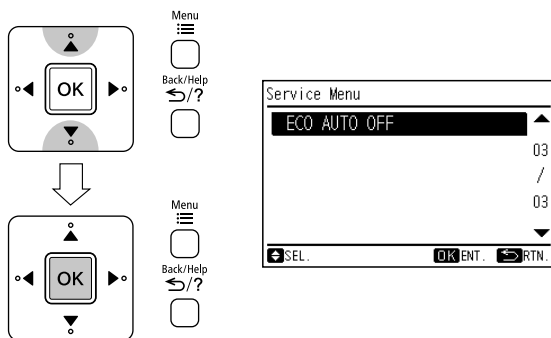
NOTE:

- The defrosting inhibit period selection setting will remain unchanged after the unit is turned off.

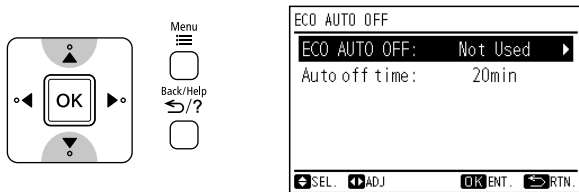
1.12 ECO AUTO OFF

This function is only available in the model with human detected sensor. When this function is set, the unit will be stopped automatically after set "Auto off time" when nobody is in the room at the eco mode setting.

- 1 Select "ECO AUTO OFF" from the service menu and press "OK".
The ECO AUTO OFF setting will be displayed.

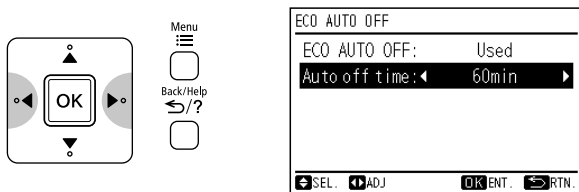


- 2 Press "△" or "▽" to select the setting items. The setting items are displayed "ECO AUTO OFF" and "Auto off time".

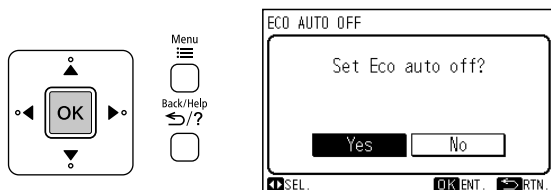


- 3 Press "◀" or "▶" to set each setting content for the selected item. When "ECO AUTO OFF" is selected, the setting contents are switched in order of "Not Used" ↔ "Used" by pressing "◀" or "▶".

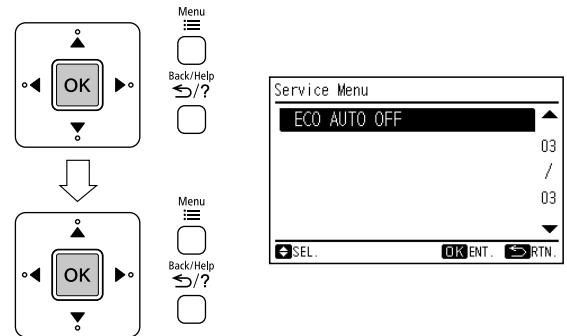
When "Auto off time" is selected, the setting time can be set between "20 min" and "120 min" by pressing "◀" or "▶" cyclically. (The set unit is 10 min.)



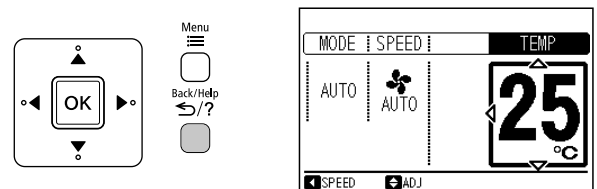
- 4 Press "OK" to finish the ECO AUTO OFF setting. The confirmation screen will be displayed.



- 5 Select "Yes" by pressing "◀" or "▶" and press "OK". The screen will return to the service menu.



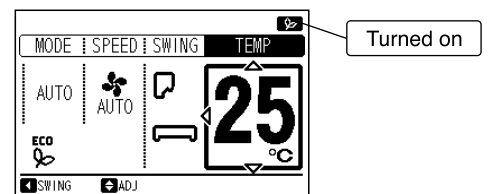
- 6 Press "Back/Help" (return/help) to return to the normal mode.



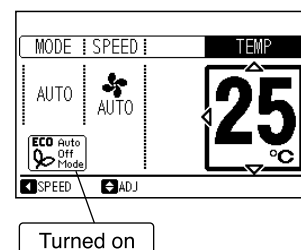
NOTE:

- The ECO AUTO OFF setting will remain unchanged after the unit is turned off.
- 7 When the ECO AUTO OFF setting is used, the screen indication will be below.

- (1) If "Eco Auto Off" setting is used, when "Eco" operation is started, "ECO" and "ECO" will be indicated on the screen of normal mode.





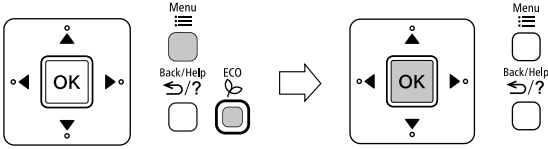
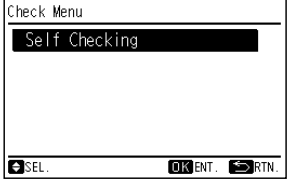




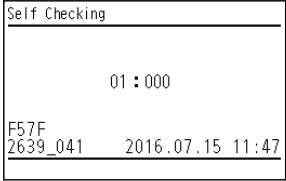
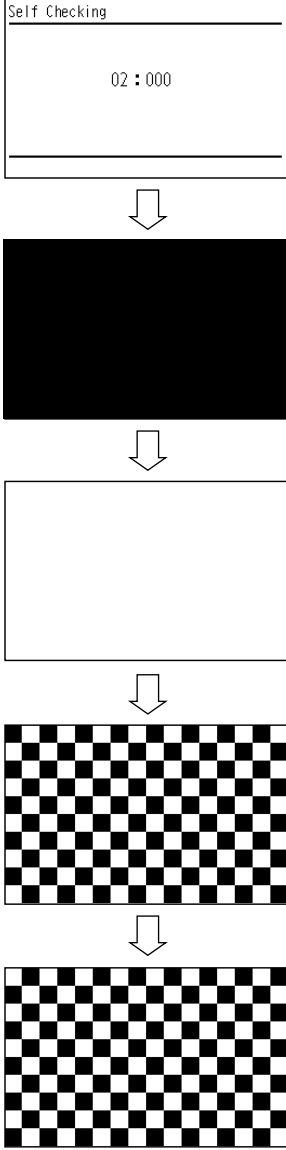
- (2) "ECO Auto Off Mode" will be indicated on the screen of normal mode when the operation is stopped by "ECO AUTO OFF" function.

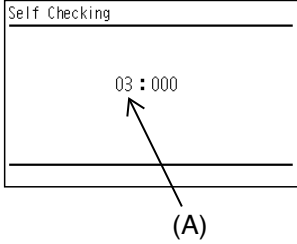
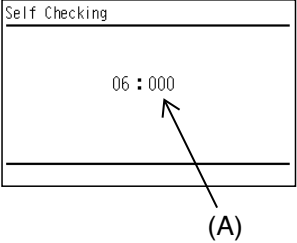

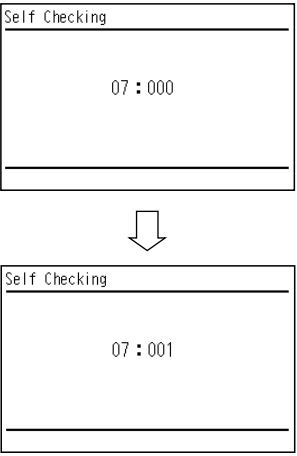
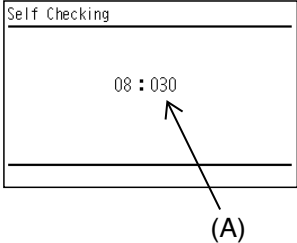
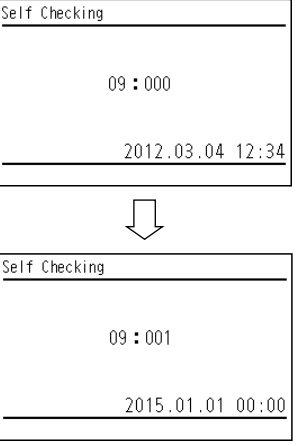


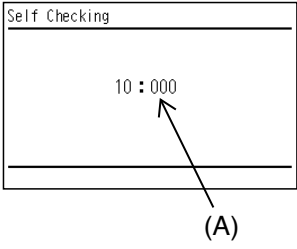
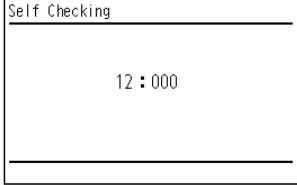
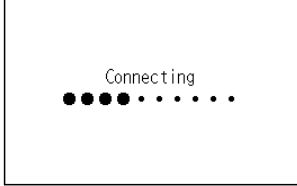
2. CHECK MENU OPERATION

2.1 SELF CHECKING

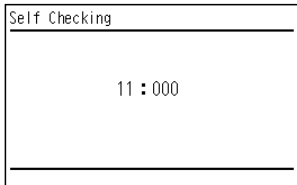
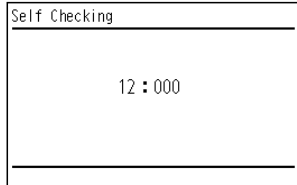
Self checking of PCB using this remote controller. The self checking performs to check the remote controller button and to clear EEPROM.

<p>(1) Press and hold  and  simultaneously for at least 3 seconds during the normal mode. The check menu will be displayed. Select "Self Checking" from the check menu and press "OK".</p> 	
<p>(2) Select the process for "Self Checking".</p> <ul style="list-style-type: none"> * To start self check, press "  ". * To clear EEPROM, press "  " and "  " and "  " simultaneously. (see EEPROM clear process (14).) 	
<p>(3) LCD test Press "OK" and the screen will be switched as shown in the picture.</p>	

<p>(4) Back light test LCD brightness is changed gradually by pressing "OK"</p>	<p>(A) : 03 : Back light test 04 : Contrast test 05 : Operation indicator test</p>
<p>(5) Contrast test Contrast of the LCD gradually changes by pressing "OK"</p>	
<p>(6) Operation indicator test Press "OK" and the operation indicator will flash in red and green twice for each.</p>	
<p>(7) Switch input test Press the 9 switched one by one. The number indicated with "(A)" will count up as switch being pressed.</p> <p>* The order of pressing switch is at random. Do not press more than 1(one) button for it will not be counted.</p>	
<p>(8) Transmission circuit test The remote controller automatically starts to check the transmission circuit.</p> <p>* To proceed next step, press "  ".</p>	
<p>(9) Remote controller thermistor test The detected temperature by remote controller thermistor is displayed at "(A)" in the right picture.</p>	
<p>(10) Date/Time test The date and time is switched from "2012.03.04 12:34" to "2015.01.01 00:00".</p>	

<p>(11) EEPROM test <EEPROM Clearing Cancel> Press " ^{ECO} " .</p> <p><EEPROM Clear> Press " OK" or wait 15 seconds. EEPROM data will be cleared. During the process , the numbers will be indicated on where is located with "(A)".</p> <p>If "(A)" has value of "999", EEPROM is in faulty condition. * In case "(A)" has "999", the process does not proceed to next step.</p>	
<p>(12) Watchdog Timer test The remote controller will automatically start to check the watchdog timer. After 10 seconds are passed, the self checking is completed and the remote controller is automatically restarted.</p> <p>If does not restart, this check is in faulty condition.</p>	
<p>(13) When the self checking is completed, the remote controller is automatically restarted. In this case, "Connecting" is indicated and operation indicator will flash in red. So please turn the circuit breaker OFF and ON.</p>	

EEPROM process

<p>(14) Clear EEPROM The remote controller will automatically restart EEPROM clearing process.</p>	
<p>(15) Watchdog Timer test The remote controller will automatically start to check the watchdog timer. After 10 seconds are passed, the self checking is completed and the remote controller is automatically restarted.</p> <p>If does not restart, this check is in faulty condition.</p>	
<p>(16) When the process is completed, the remote controller is automatically restarted. In this case, "Connecting" is indicated and operation indicator will flash in red. So please turn the circuit breaker OFF and ON.</p>	