Owner's Manual



Fig. 1 — Wired Controller

NOTE: Images are for illustration purposes only. Actual models may differ slightly.

TABLE OF CONTENTS

| | PAGE |
|-----------------------------------------|------|
| SAFETY CONSIDERATIONS | 3 |
| WIRED CONTROLLER FEATURES AND FUNCTIONS | 5 |
| WIRED CONTROLLER DISPLAY | 6 |
| WIRED CONTROLLER FUNCTIONS | 7 |
| INITIAL SETUP | 8 |
| WEEK AND DAY SETTINGS FOR WEEK 1 | 16 |
| WEEKLY TIMER OPERATION | 18 |
| WEEK AND DAY SETTINGS FOR WEEK 2 | 23 |
| WIRED CONTROLLER ERROR CODES | |
| QUERIES AND SETTINGS | 33 |
| TECHNICAL INDICATION AND REQUIREMENT | |

NOTE: In order to properly service the wired controller, read this manual carefully prior to operating the unit. Keep this manual after reading for future reference.

SAFETY CONSIDERATIONS

Installing, starting up, and servicing air-conditioning equipment can be hazardous due to system pressures, electrical components, and equipment location (roofs, elevated structures, etc.). Only trained, qualified installers and service mechanics should install, start-up, and service this equipment. Untrained personnel can perform basic maintenance functions such as cleaning coils.

When working on the equipment, observe precautions in the literature and on tags, stickers, and labels attached to the equipment.

Follow all safety codes. Wear safety glasses and work gloves. Keep a quenching cloth and fire extinguisher nearby when brazing. Use care in handling, rigging, and setting bulky equipment.

Read these instructions thoroughly and follow all warnings or cautions included in the literature and attached to the unit. Consult the local building codes and National Electrical Code (NEC) for special requirements. Recognize safety information.

This is the safety-alert symbol . When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand these signal words: **DANGER**, **WARNING**, and **CAUTION**. These words are used with the safety-alert symbol.

DANGER identifies the most serious hazards which will result in severe personal injury or death.

WARNING signifies hazards which could result in personal injury or death. **CAUTION** is used to identify unsafe practices which may result in minor personal injury or product and property damage.

NOTE is used to highlight suggestions which will result in enhanced installation, reliability, or operation.



ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death. Before beginning any modification or installation of this kit, ensure the main electrical disconnect is in the **OFF** position. Ensure power is disconnected to the fan coil unit. On some systems both the fan coil and the outdoor unit may be on the same disconnect. Tag the disconnect switch with a suitable warning label. There may be more than one to disconnect.



CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage or improper operation. Do not install the wired controller in an area subjected to excessive steam, oil or sulfide gas. Doing so may damage the controller and/or cause it to fail.

WIRED CONTROLLER FEATURES AND FUNCTIONS



Fig. 2 — Wired Controller

Features:

- LCD display
- Malfunction code display for error code display
- 4-way wire layout design, smooth rear surface makes it easier to position the wires and install the controller
- Room temperature display
- · Weekly timer

Functions:

- Mode: select AUTO-LOW-DRY-HEAT-FAN
- Fan Speed: AUTO/LOW/MEDIUM/HIGH
- Swing (on some models)
- Timer ON/OFF
- Temperature Setting
- Weekly Timer
- FOLLOW ME
- Turbo
- 24-Hour System
- 12-Hour System
- 8 degree heating function (on some models)
- Sleep
- Auto-restart
- Individual louver control (on some models)
- Automatic airflow test
- Child Lock
- LCD display
- Clock

WIRED CONTROLLER DISPLAY

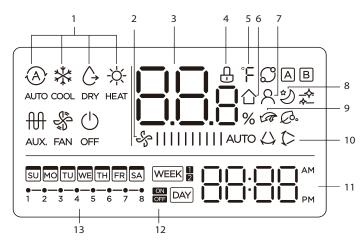


Fig. 3 — Wired Controller Display

- Operation mode indication
- Fan speed indication
- Temperature display
- Lock indication
- °F / °C indication
- 2. 4. 5. 6. 7. Room temperature indication
- Follow Me function indication
- Sleep mode indication

- Electric Auxiliary Heat/Turbo Function NOTE: AHU models only have Turbo function.
- Left-Right Swing 10.
- 11.
- Clock display ON/OFF Timer 12.
- 13. Timer Display

WIRED CONTROLLER FUNCTIONS

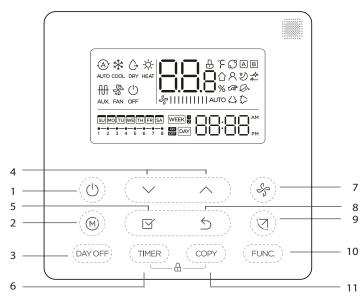


Fig. 4 — Wired Controller Functions

- Power
- 2. Mode
- 3. Day Off/Del
- 4. Adjust
- 5. Confirm
- 6. Timer

- 7. Fan Speed
- 8. Back
- 9. Swing
- 10. Function
- 11. Copy
- 12. IR (Infrared) Signal Receiver

INITIAL SETUP

Set the current day and time

NOTE: The wired controller can be powered ON or OFF during this step.

 Press TIMER for 2 seconds or more to set the current date and time. The TIMER display flashes (see Fig 5).



Fig. 5 —Timer

Press the UP or DOWN arrow (Fig. 6) to set the week day; the selected week day will flash (Fig. 7).



Fig. 6 —Up or Down Arrows



Fig. 7 — Days of the Week

Press TIMER to confirm. If there is no button pressed within 10 seconds, the displayed week day will be saved. 4. Press the UP or DOWN arrows (Fig. 6) to set the current time. Press repeatedly to adjust the current time in 1-minute increments. Press and hold to adjust the current time continuously. Press TIMER to confirm. If there is no button pressed within 10 seconds the displayed time is saved.



ex. Monday 11:20

Fig. 8 — Week Day and Time

 Time scale selection: Press TIMER (see Fig. 5) and DAY OFF (Fig. 9) for 2 seconds to alternate the clock time display between the 12 hour and 24 hour formats.



Fig. 9 — Timer

Start and Stop Operation

Press POWER (Fig. 10) to power on the controller.



Fig. 10 — Power

To Set the Operation Mode

 Press MODE (see Fig. 11) to set the OPERATION MODE (see Fig. 12) (HEAT function is invalid for a COOL only type unit).



Fig. 11 — Mode



Fig. 12 — Operation Modes

Room Temperature Setting

 Press the **UP** or **DOWN** arrow (Lower or Raise (see Fig.13)) to set the room temperature.

NOTE: This function in unavailable in FAN mode.



Fig. 13 — Up or Down Arrows (Lower and Raise)

Indoor Setting Temperature Range: 62°F~86°F (17°C~30°C)

 °F and °C Scale Selection - Press and hold the UP or DOWN arrow for 3 seconds to alternate the temperature display between the °F and °C scale.

Fan Speed

Press **FAN SPEED** to set the fan speed.

NOTE: This function is unavailable when the unit is in AUTO or DRY mode.



Fig. 14 — Fan Speed

Keypad Tone

Enable Keypad Tone

 Press SWING and FUNC. together (Fig. 15) for 3 seconds to enable the keypad tone.

Disable Keypad Tone

 Press SWING and FUNC. together (Fig. 15) for 3 seconds to disable the keypad tone.



Fig. 15 — Keypad Tone Set

Use the Child Lock Function

Activate the Child Lock

 Press TIMER and COPY (Fig. 16) together for 3 seconds to activate the CHILD LOCK function and lock all the buttons on the wired controller. When the CHILD LOCK function is activated, the LOCK icon appears (Fig. 17).

De-activate the Child Lock

 Press TIMER and COPY (Fig. 16) together for 3 seconds to deactivate the CHILD LOCK function.



Fig. 16 — Timer and Copy



Fig. 17 — Child Lock

Use the Swing (UP-DOWN) Function (for some models only)

 Press SWING (Fig. 18) for 2 seconds to start the UP-DOWN LOUVER SWING function. When the function is activated, the UP -DOWN SWING icon appears (Fig. 19).

NOTE: For the KSACN0601AAA model, press SWING to start the UP-DOWN LOUVER SWING function. For the KSACN0701AAA model, press SWING for 2 seconds to start the UP-DOWN LOUVER SWING function.

2. Press **SWING** again to stop.





Fig. 18 — Swing

Fig. 19 — Up-Down Swing

Use the Swing (LEFT-RIGHT) Function (for some models only)

- Press SWING (Fig. 18) for 2 seconds to start the LEFT-RIGHT SWING louver function.
- Press SWING again for 2 seconds to stop.

When the **LEFT-RIGHT SWING** function is activated, the **LEFT-RIGHT SWING** icon appears (Fig. 20).



Fig. 20 — Left-Right Swing

Sleep

In the AUTOMATIC, COOLING or HEATING mode, press FUNC. to select the SLEEP icon, and then press CONFIRM to turn the SLEEP function on or off, and set the wind speed to automatic wind.

After the sleep function is turned on, turning on turbo, 8-degree heating, switching modes, or adjusting the wind speed will cancel the **SLEEP** function.

Turbo (on some models)

Under the COOL or HEAT mode, TURBO and FOLLOW ME can be activated.

 Press FUNC. to set the TURBO or FOLLOW ME function. The select function icon flashes.



Fig. 21 — FUNC.

2. Press **CONFIRM** to confirm the setting (see Fig. 22).

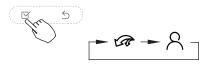


Fig. 22 — Confirm the Setting

When **TURBO** is activated, the **TURBO** icon appears (see Fig. 23).



NOTE: The electric auxiliary heating function of the AHU model is controlled by the MODE button, and the FUNC. button is for the turbo function.

FOLLOW ME

Activate FOLLOW ME

- 1. Press FUNC. to select the FOLLOW ME icon.
- Press CONFIRM to activate FOLLOW ME.

Deactivate FOLLOW ME

- Press FUNC, to select the FOLLOW ME icon.
- 2. Press CONFIRM to deactivate.

When the FOLLOW ME function pindication appears, the room temperature is detected by the sensor in the wired controller.

Fig. 24 — FOLLOW Me

Timer Functions

For more information, see "To Set the ON or OFF TIMER" on page 15.

Weekly: Use the WEEKLY function to set operating times for each day of the week.



Fig. 25 — WEEK

On: Day: Use the ON:DAY function to start air conditioner operation.



Fig. 26 — ON:DAY

Off: Day: Use the OFF:DAY function to stop air conditioner operation.



Fig. 27 — OFF:DAY

On and Off: Day: Use the On and Off: Day function to start and stop air conditioner operation.



Fig. 28 — ON and OFF:DAY

To Set the ON or OFF TIMER

1. Press TIMER to select the ON:DAY or OFF:DAY.



Fig. 29 — Select the ON:DAY or OFF:DAY

2. Press CONFIRM and the TIMER display flashes.



Fig. 30 — Confirm

3. Press the **UP** or **DOWN** arrow to set the time. After the time is set, the timer starts or stops.



Fig. 31 — Up or Down arrow to set time

Press CONFIRM.



Fig. 32 — Confirm

WEEK AND DAY SETTINGS FOR WEEK 1

WEEK 1 Timer Setting

- 1. Press TIMER (several times if needed) to select WEEK 1.
- 2. Press CONFIRM.



Fig. 33 — Press Timer then Confirm

Day of the WEEK Setting

- Press the UP or DOWN arrow to select the day of the week.
- Press CONFIRM.

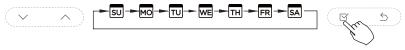


Fig. 34 — Press Up and Down Arrows - Select Day - Confirm

SET the ON Timer for Timer Setting 1

- 1. Press the **UP or DOWN** arrow to set the time of the **ON** timer.
- Press CONFIRM.



Fig. 35 — Up or Down Arrow - Confirm



Fig. 36 — Select Timer Setting(s)

Set the OFF Timer Setting for Timer Setting 1

- Press the UP or DOWN arrow to set the OFF timer.
- Press CONFIRM.



Fig. 37 — UP or DOWN Arrow - Confirm

NOTE: Users can revert to the previous step by pressing BACK. The time of the timer setting can be deleted by pressing DAY OFF. The current setting is restored and the weekly timer setting is withdrawn when there is no operation selected in 30 seconds.

WEEKLY TIMER OPERATION

To activate the WEEKLY TIMER operation

1. Press and release TIMER until WEEK 1 appears on the display.

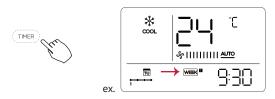


Fig. 38 — Press Timer

To deactivate the WEEKLY TIMER operation

1. Press and release **TIMER** until **WEEK 1** no longer appears on the display.

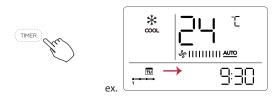


Fig. 39 — Press Timer

To Turn Off the Air Conditioner with the Week Timer

 Press POWER and the air conditioner turns OFF temporarily. The air conditioner turns back on automatically when the ON timer's set time is reached. For example, press POWER once at 10:00 AM, the air conditioner turns back on at the timer setting 2:00 PM (Fig. 40).

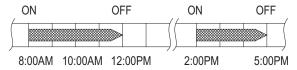


Fig. 40 —Weekly Timer Display

Press POWER for 2 seconds, the air conditioner turns off completely and cancels the timing function.

Set the DAY OFF For WEEK 1

 Select WEEK 1 then press CONFIRM. For more information, see "WEEKLY TIMER OPERATION" on page 18.



Fig. 41 — Confirm

2. Press the **UP or DOWN** arrow to select the day of the week.



Fig. 42 — Up or Down Arrows

3. Press DAY OFF to select day(s) off.



Fig. 43 - Select Day(s) off

A **DAY OFF** can be set for other days by repeating steps 2 through 3.

4. Press **BACK** to revert to the weekly timer.



Fig. 44 — Back

The **DAY OFF** setting is canceled at the end of the set day.

Copy the Setting from One Day to Another

A scheduled event, made once, can be copied to another day of the week. The scheduled events of the selected day will also be copied to the new day.

During the weekly timer, press CONFIRM.



Fig. 45 — Confirm

2. Press the **UP or DOWN** arrow to select the day to copy from.



Fig. 46 — Up or Down Arrows

Press COPY, "CY" appears on the display.



Fig. 47 — Copy

4. Press the **UP or DOWN** arrow to select the day to copy to.



Fig. 48 — Up or Down Arrow

5. Press COPY to confirm.



ex. Copy the setting of Monday to Wednesday

Fig. 49 — Copy

Other days can be copied by repeating steps 4 through 5.

Press CONFIRM.



Fig. 50 — Confirm

7. Press BACK to revert to the weekly timer.



Fig. 51 — Back

WEEK AND DAY SETTINGS FOR WEEK 2

WEEK 2 Timer Setting

- Press TIMER (repeatedly if need be) to select WEEK 2
- Press CONFIRM.



Fig. 52 — Timer and Confirm

Day of the WEEK 2 Setting

- Press the UP or DOWN arrow to select the day of the week.
- Press CONFIRM.



Fig. 53 — Up or Down Arrows - Select Day - Confirm

SET the ON Timer for Timer Setting 1

- 1. Press the **UP or DOWN** arrow to select the timer setting number of the day (1-8).
- 2. Press CONFIRM.



Fig. 54 — Up or Down Arrows - Confirm

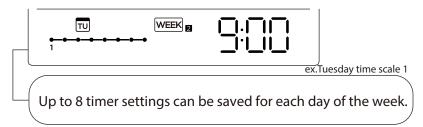


Fig. 55 — Timer Settings

SET the ON Timer for Timer Setting 1

- Press the UP or DOWN arrow to select the setting time. The setting time, mode, temperature and fan speed appear on the display.
- 2. Press **CONFIRM** to enter the setting time process.



Fig. 56 — Up or Down Arrows - Confirm



Fig. 57 — Select Events

Operation Mode Setting

- Press the UP or DOWN arrow to set the OPERATION mode.
- 2. Press CONFIRM.

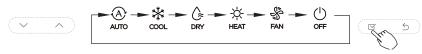


Fig. 58 — Press UP or DOWN Arrows - Select Mode - Confirm

Room Temperature Setting

- 1. Press the **UP or DOWN** arrow to set the room temperature.
- Press CONFIRM.



Fig. 59 — Press UP or DOWN Arrow - Confirm

NOTE: This setting is unavailable in the FAN or OFF modes.

Fan Speed Setting

- 1. Press the **UP or DOWN** arrow to set the fan speed.
- Press CONFIRM.



Fig. 60 — UP or DOWN Arrows - Fan Speed - Confirm

NOTE: This setting is unavailable in the AUTO, DRY or OFF modes.

NOTE: Different scheduled events can be set by repeating all the steps from the "SET the ON Timer for Timer Setting 1" on page 25 through the Fan Speed Setting steps found on this page.

The weekly timer setting can be returned to the previous step by pressing **BACK**. The current setting is restored. The controller **will not** save the weekly timer settings if there is no operation within 30 seconds.

Weekly Timer Operation

To start the Weekly Timer Operation

1. Press **TIMER** to select **WEEK 2**, and the timer starts automatically.



Fig. 61 — Select Timer

To cancel the Weekly Timer Operation

1. Press **POWER** for 2 seconds. The wired controller must be **ON** to perform the function.



Fig. 62 - Power

The TIMER mode can also be canceled by changing the timer mode using TIMER.



Fig. 63 — Press Timer

Set the DAY OFF (for WEEK 2)

1. Select WEEK 2 then press CONFIRM. See "Weekly Timer Operation" on page 27.



Fig. 64 — Confirm

2. Press the **UP or DOWN** arrow to select the day of the week.



Fig. 65 — Up or Down Arrows

Press DAY OFF to select day(s) off.

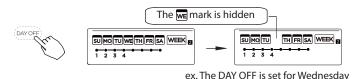


Fig. 66 — Select DAY OFF

A **DAY OFF** can be set for other days by repeating steps 2 through 3.

4. Press **BACK** to revert to the weekly timer.

NOTE: To cancel, follow the same procedures used for setup. The DAY OFF setting is canceled at the end of the set day.

Copy the Setting From One Day to Another

A scheduled event, made once, can be copied to another day of the week. The scheduled events of the selected day of the week will be copied. Using the **COPY** mode simplifies scheduling.

In the weekly timer, press CONFIRM.



Fig. 67 — Confirm

2. Press the **UP or DOWN** arrow to select the day to copy from.



Fig. 68 — Up or Down Arrows

3. Press COPY; the letters CY appear on the display.

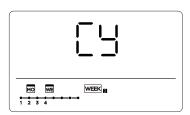
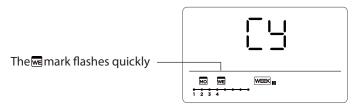


Fig. 69 — Press Copy

4. Press the **UP or DOWN** arrow to select the day to copy to.

5. Press COPY to confirm.



ex. Copy the setting of Monday to Wednesday

Fig. 70 - Press Copy

Other days can be copied by repeating steps 4 through 5.

6. Press CONFIRM to confirm the settings.



Fig. 71 — Confirm

7. Press BACK to revert to the weekly timer.



Fig. 72 — Back

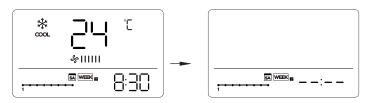
Delete the Time Scale in One Day

During the weekly timer setting, press CONFIRM.



Fig. 73 — Confirm

Press the UP or DOWN arrow to select the setting time you want to delete. The setting time, mode, temperature and fan speed appear on the display. The setting time, mode, temperature and fan speed can be deleted by pressing the DAY OFF.



ex. Delete the time scale 1 in Saturday

Fig. 74 — Select Day

WIRED CONTROLLER ERROR CODES

Table 1 — Error Codes

| DISPLAY ON IDU AND WIRED CONTROLLER | ERROR INFORMATION | |
|----------------------------------------|------------------------------------------------------|--|
| EH OO/EH OA | Indoor unit EEPROM parameter error | |
| EL O1 | Indoor/outdoor unit communication error | |
| EH 02 | Zero-crossing signal detection error | |
| EH 03 | Indoor fan operating outside of the normal range | |
| EC 51 | Outdoor unit EEPROM parameter error | |
| EC 52 | T3 is in open circuit or has short circuited | |
| EC 53 | T4 is in open circuit or has short circuited | |
| EC 54 | TP is in open circuit or has short circuited | |
| EC 5L | T2B is in open circuit or has short circuited | |
| EH 60 | T1 is in open circuit or has short circuited | |
| EH PJ | T2 is in open circuit or has short circuited | |
| EC 07 | Outdoor fan operating outside of the normal range | |
| EH Ob | Indoor PCB/Display board communication error | |
| EL OC | Refrigerant leakage detection | |
| PC 00 | IPM malfunction or IGBT OSCP | |
| PC O1 | Over voltage or over low voltage protection | |
| PC 02 | Compressor or IPM high temp/pressure protection | |
| PC 04 | Inverter compressor drive error | |
| PC D8 | Current overload protection | |
| PC 40 | Comm. error between outdoor chip and compressor chip | |
| PC 03 | Low pressure protection | |
| EH bl | Indoor board and Multi-function communication error | |
| FH Od | Ionizer malfunction | |

^{*}Check the indoor unit's error display and review the owner's manual if other error codes appear.

NOTE: The error displayed on the wire controller will differ from the error displayed on the unit. If the error code appears, check the Owner's and Installation Manual and Service Manual for the model number of the unit or wired controller the error is displayed on.

QUERIES AND SETTINGS

CAUTION: All changes should be performed ONLY by authorized professionals.

Indoor Unit Tx Temperature Query Function

 When the air conditioning unit is OFF, press COPY for 3 seconds to enter query mode on the wired controller.



Fig. 75 — Copy

Press the UP or DOWN arrows to select.



Fig. 76 — Up or Down Arrows

When the air conditioning unit is OFF and in query mode, press the UP or DOWN arrows to select SP (For Ducted Models Only).



Fig. 77 — Up or Down Arrows

- 4. Press **CONFIRM** to adjust the static pressure value.
- 5. Press the **UP or DOWN** arrow to select the static pressure value (0~4).
- Press CONFIRM to select the value.

Auto Airflow Adjustment

 When the air conditioning unit is OFF and in QUERY mode, press the UP or DOWN arrow to select AF (For Ducted Models Only).



Fig. 78 — Up or Down Arrows - Select AF

- Press CONFIRM to activate AF mode
- 3. The AF mode requires 3~6 minutes to complete an airflow adjustment. The unit automatically exits the mode when the adjustment completes.
- To interrupt or exit the AF mode at anytime, press BACK or press ON/OFF or press CONFIRM. If there is no response for 30 seconds, the wired controller exits the query mode.



Fig. 79 — Back - Confirm

FOLLOW ME Mode Temperature Compensation

 When the air conditioning unit is OFF and in QUERY mode, press the UP or DOWN arrow to select tF. The compensation temperature Range: 23°F ~ 41°F (-5°C~5°C).



Fig. 80 — Up or Down Arrows - Select Confirm

- 2. Press **CONFIRM** to enter the temperature compensation value.
- 3. Press the **UP or DOWN** arrow to select the temperature compensation value.
- 4. Press **CONFIRM** to set <u>⊢</u> compensation temperature.

Mode Customization

This setting allows the configuration of the wired controller customizing the modes available for the user as CH Heat Pump, CC Cooling Only, HH Heating Only or NA No AUTO Mode.

When the air conditioning unit is OFF and in query mode, press UP or DOWN arrow to select TYPE.



Fig. 81 — Up or Down Arrows - Select Type

2. Press CONFIRM to enter TYPE, press UP or DOWN arrow to select the type (see Fig. 82).



Fig. 82 — Press CONFIRM

Press CONFIRM.

Set the Minimum and Maximum Temperature Values

When the air conditioning unit is OFF and in QUERY mode, press the UP or DOWN arrow to select tHI
or tLo.



Fig. 83 — UP or DOWN Arrows - Select \\ or \\ \(\)

- 2. Press **CONFIRM** to enter the setting.
- 3. Press the **UP or DOWN** arrow to select the temperature value.
- Press CONFIRM to complete. The maximum setting temperature range is 77°F~86°F (25°C~30°C). The minimum setting temperature range is 62.6°F~75.2°F (17°C ~24°C).

NOTE: Factory default setting on EHI and ELI is "--".

- EHI Maximum value setting function
- \(\begin{aligned} \begin{al

Remote Control Mode Setting for the Wired Controller

1. When the air conditioning unit is OFF and in QUERY mode, press the UP or DOWN arrow to select rEC.



Fig. 84 — UP or DOWN Arrow - Select rEC

- 2. Press CONFIRM to enter the mode setting.
- 3. Press UP or DOWN arrow to select the remote control mode ON or OFF (OF).
- Press CONFIRM.

NOTE: ON or OFF (OF) appears in the temperature area to indicate the remote control mode. When the selection is OFF (OF), the wire controller does not process any remote control signals.

Restore Factory Settings

When the air conditioning unit is OFF and in QUERY mode, press the UP or DOWN arrow to select
 □□□□, the temperature zone appears --.



Fig. 85 — UP or DOWN Arrows - Select

- 2. Press **CONFIRM** to enter the setting.
- Press the UP or DOWN arrow to select ON.
- Press CONFIRM.

NOTE: All the Wired Controller's settings are restored to the factory default settings.

TECHNICAL INDICATION AND REQUIREMENT

EMC and EMI comply with the CE certification requirements.