TOSHIBA

Carrier AIR CONDITIONER (MULTI TYPE) **Owner's Manual**

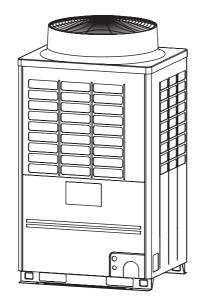




Model name:

<Heat Pump Model>

MMY-MAP0724HT9UL MMY-MAP0964HT9UL MMY-MAP1144HT9UL MMY-MAP0724HT6UL MMY-MAP0964HT6UL MMY-MAP1144HT6UL





Owner's Manual

English

Original instruction

Thank you very much for purchasing TOSHIBA Air Conditioner.

Please read this owner's manual carefully before using your Air Conditioner.

· Obtain the "Owner's manual" and "Installation manual" from constructor (or dealer).

Request to constructor or dealer

· Please clearly explain the contents of the Owner's manual and hand over it.

ADOPTION OF NEW REFRIGERANT

This Air Conditioner adopts a new refrigerant HFC (R410A) instead of the conventional refrigerant R22 in order to prevent destruction of the ozone layer.

This appliance is not intended for use by person (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

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1 Precautions for safety

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 heat exchanger. All other operations should be performed by trained service personnel.

Before 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 quenching cloth and fire extinguisher nearby during brazing. Use care in handling, rigging, and setting bulky equipment.

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

The manufacturer shall not assume any liability for the damage caused by not observing the description of this manual.

⚠ WARNING

General

- Carefully read Owner's Manual before starting the air conditioner. There are many important things to keep in mind for daily
 operation.
- Ask for installation to be performed by the dealer or a professional. Only a qualified installer is able to install an air conditioner. If a non-qualified person installs an air conditioner, it may result in problems such as fire, electric shock, injury, water leakage, noise and vibration.
- Do not use any refrigerant different from the one specified for complement or replacement.
 Otherwise, abnormally high pressure may be generated in the refrigeration cycle, which may result in a failure or explosion of the product or an injury to your body.
- Places where the operation sound of the outdoor unit may cause a disturbance. (Especially at the boundary line with a neighbor, install the air conditioner while considering the noise.)

Transportation and storage

- During transporting the air conditioner, wear shoes with protective toe caps, protective gloves, and other protective clothing.
- To transport the air conditioner, do not take hold of the bands around the packing carton. You may injure yourself if the bands should break.
- Before stacking the packing cartons for storage or transportation, heed the precautions written on the packing cartons.
 Failure to heed the precautions may cause the stack to collapse.
- The air conditioner must be transported in stable condition. If any part of the product is broken, contact your dealer.

Installation

- Only a qualified installer or qualified service person is allowed to carry out the electrical work of the air conditioner. Under
 no circumstances must this work be done by an unqualified individual since failure to carry out the work properly may result
 in electric shocks and/or electrical leaks.
- After the installation work has been completed, have the installer explain about the circuit breaker positions. In the event
 that trouble has occurred in the air conditioner, set the circuit breaker to the OFF position, and contact a service person.
- If the unit is installed in a small room, take appropriate measures to prevent the refrigerant from exceeding the limit
 concentration even if it leaks. Consult the dealer from whom you purchased the air conditioner when you implement the
 measures. Accumulation of highly concentrated refrigerant may cause an oxygen deficiency accident.
- Do not install the air conditioner in a location that may be subject to a risk of expire to a combustible gas. If a combustible gas leaks and becomes concentrated around the unit. a fire may occur.
- If separately sold products are used, use Toshiba specified products only. Using unspecified products may cause fire, electric shock, water leak or other failure.
- Connect ground wire. (grounding work) Incomplete grounding may cause an electric shock.

Operation

- Before opening the intake grille of the indoor unit or service panel of the outdoor unit, set the circuit breaker to the OFF position. Failure to set the circuit breaker to the OFF position may result in electric shocks through contact with the interior parts. Only a qualified installer or qualified service person is allowed to remove the intake grille of the indoor unit or service panel of the outdoor unit and do the work required.
- Inside the air conditioner are high-voltage areas and rotating parts. Due to the danger of electric shocks or of your
 fingers or physical objects becoming trapped in the rotating parts, do not remove the intake grille of the indoor unit or
 service panel of the outdoor unit. When work involving the removal of these parts is required, contact a qualified
 installer or a qualified service person.
- Do not move or repair any unit by yourself. Since there is high voltage inside the unit, you may get electric shock during removing the cover and main unit.
- Use of a stand more than 50 cm high to clean the filter of the indoor unit or to carry out other such jobs constitutes
 working at heights. Due to the danger of falling off the stand and injuring yourself while working at heights, this kind
 of work should not be done by unqualified individuals. When this kind of work must be carried out, do not do it yourself
 but ask a qualified installer or a qualified service person to do it for you.
- Do not touch the aluminum fin of the outdoor unit. You may injure yourself if you do so. If the fin must be touched, do not touch it yourself but contact a qualified installer or a qualified service person.
- Do not climb onto or place objects on top of the outdoor unit. You may fall or the objects may fall off of the outdoor unit and result in injury.
- Do not place any combustion appliance in a place where it is directly exposed to the wind of air conditioner, otherwise
 it may cause imperfect combustion.
- When the air conditioner is operated with a combustion appliance in the same place, ventilate the room adequately.
 Poor ventilation may causes oxygen shortage.
- · When the air conditioner is used in a closed room, ventilate the room. Poor ventilation may causes oxygen shortage.
- Do not expose your body to cool air directly for a long time and do not cool yourself excessively.
 Doing so may result in deteriorated physical condition and ill health.
- Do not insert your finger or a stick into the air intake or outlet.
- Doing so may result injury as the fan is rotating at high speed inside the unit.
- Consult the shop where you purchased the air conditioner if air conditioning (cooling and heating) is not performed
 properly as a refrigerant leakage may be the cause. Confirm the repair details with a qualified service person when
 the repair includes additional charging of the refrigerant.
- Stop running the air conditioner and turn off the breaker before cleaning.
 Otherwise, injury may result as the fan is rotating at high speed inside the unit.

Repairs

- If there is any kind of trouble (such as when an error display has appeared, there is a smell of burning, abnormal sounds are heard, the air conditioner fails to cool or heat or water is leaking) has occurred in the air conditioner, do not touch the air conditioner yourself but set the circuit breaker to the OFF position, and contact a qualified service person. Take steps to ensure that the power will not be turned on (by marking "out of service" near the circuit breaker, for instance) until qualified service person arrives. Continuing to use the air conditioner in the trouble status may cause mechanical problems to escalate or result in electric shocks or other failure.
- If the fan grille is damaged, do not approach the outdoor unit but set the circuit breaker to the OFF position, and contact a
 qualified service person to have the repairs done. Do not set the circuit breaker to the ON position until the repairs are
 completed.
- If there is a danger of the indoor unit's falling, do not approach the indoor unit but set the circuit breaker to the OFF position, and contact a qualified installer or a qualified service person to refit the unit. Do not set the circuit breaker to the ON position until the unit has been refitted.
- If there is a danger of the outdoor unit's toppling over, do not approach the outdoor unit but set the circuit breaker to the
 OFF position, and contact a qualified installer or a qualified service person to have the improvements or refitting done. Do
 not set the circuit breaker to the ON position until the improvements or refitting is completed.
- · Do not customize the unit. Doing so may result in fire, electric shock or other failure.

Relocation

 When the air conditioner is to be relocated, do not relocate it yourself but contact a qualified installer or a qualified service person. Failure to relocate the air conditioner properly may result in electric shocks and/or a fire.



Cautions about installation (Confirm the following cautions.)

- Certainly lay the drain hose for perfect draining. Bad drainage may cause flooding in the house and getting furniture
 wet.
- Use an exclusive power supply circuit for air conditioner at the rated voltage. An insufficient power supply capacity
 or inappropriate installation may cause fire.
- · Confirm that the outdoor unit are fixed on the base. Otherwise, falling down of the units or other accidents may occur.

Cautions about operation

- Do not use this air conditioner for special purpose such as preserving food, precision instruments, art objects, breeding animals, car, vessel, etc.
- · Do not operate the buttons with wet hands. Doing so may cause electric shock.
- If the air conditioner will not be used for a considerably long time, turn off the main switch or the circuit breaker, for safety.
- To make the air conditioner operate in its original performance, operate it within the range of the operating temperature specified in the instructions. Otherwise it may cause a malfunction, or water leak from the unit.
- · Prevent any liquid from falling into the remote control. Do not spill juice, water or any kind of liquid.
- Do not wash the air conditioner. Doing so may result in electric shock.
- Check whether the installation base and other equipment have become deteriorated after being used for a long time.
 Leaving them such condition may result in the unit's falling down and causing injury.
- Do not leave flammable sprays or other flammable materials near the air conditioner, and do not spray flammable aerosol directly to the air conditioner. They may catch fire.
- Stop running the air conditioner and turn off the breaker before cleaning.
- Otherwise, injury may result as the fan is rotating at high speed inside the unit.
- Ask an authorized dealer or qualified service person for cleaning of the air conditioner
 Cleaning the air conditioner in an improper manner may cause damage to plastic parts, insulation failure of electric parts, and result in a malfunction. In the worst case, it may result in water leakage, electric shock, smoke emission and fire
- Do not put a water container such as a vase on the unit.
 Water intrusion into the unit may occur and it may cause deterioration of electric insulation and result in electric shock.

■ Warning indications on the air conditioner unit

Warning indication Description **WARNING** AVERTISSEMENT ELECTRICAL SHOCK HAZARD RISQUE D'ÉLECTROCUTION Disconnect all remote electric power supplies before servicing. Déconnecter toutes les alimentations électriques avant d'entreprendre les travaux FIRE HAZARD / RISQUE DE FEU Do not use torch to remove components. Oil may catch fire. Use tubing cutter. WARNING **ELECTRICAL SHOCK HAZARD** Ne pas utiliser une torche pour retirer les composantes. Huile peut prendre feu. Utiliser une coupe-tube. Disconnect all remote electric power supplies before servicing. **EXPLOSION HAZARD** RISQUE D'EXPLOSION System under pressure. Relieve all pressure and recover refrigerant before system repairs or final disposal. Use all service ports. Système sous pression. Relever outes pressions et recouvrir le éfrigérant avant d'entrprendre les travaux d'entretien ou disposition finale du produit. Utiliser tous les ports de maintenance. DH7929510 CAUTION **AVERTISSEMENT** High Pressure R-410A Refrigerant Operating pressures may exceed limits of R-22 service equipment. Haute pression Réfrigérant R-410A Pressions de fonctionnement peuvent excéder les limites des équipements CAUTION de service de R-22. High temperature parts. SERVICE/SERVICE You might get burned when removing this panel. USE ONLY R-410A REFRIGERANT AND POE COMPRESSOR OIL Refer to product literature before Installing or Servicing this unit. UTILISER SEULEMENT RÉFRIGÉRANT R-410A ET L'HUILE POLYOL ESTER POUR COMPRESSEUR Référer à la littérature pour ce produit avant l'installation ou l'entretien de cette unité. DH79295001

■ Information on the transportation, handling and storage of the carton

Examples of indication on the carton

Symbol	Description	Symbol	Description
Ť	Keep dry	DO NOT DROP	Do not drop
FRAGILE	Fragile	DO NOT LAY DOWN	Do not lay down
11 cartons	Stacking height (12 cartons can be stacked in this case)	<u> </u>	This side up
	Do not step		Handle with care

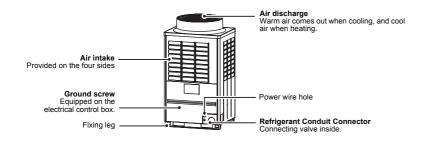
■ Connectable indoor units

Model type	Model Name
4-way cassette type	MMU-AP182H2UL, MMU-AP0212H2UL, MMU-AP0242H2UL MMU-AP0302H2UL, MMU-AP0362H2UL, MMU-AP0422H2UL
Compact 4-way cassette type	MMU-AP0071MH2UL, MMU-AP0091MH2UL, MMU-AP0121MH2UL MMU-AP0151MH2UL, MMU-AP0181MH2UL
Ceiling type	MMC-AP0181H2UL, MMC-AP0241H2UL, MMC-AP0361H2UL, MMC-AP0421H2UL
High wall type	MMK-AP0073H2UL, MMK-AP0093H2UL, MMK-AP0123H2UL MMK-AP0153H2UL, MMK-AP0183H2UL, MMK-AP0243H2UL * For details on these models, read the owner's manuals that come with the indoor units.
Medium static ducted type	MMD-AP0074BH2UL, MMD-AP0094BH2UL, MMD-AP0124BH2UL MMD-AP0154BH2UL, MMD-AP0184BH2UL, MMD-AP0214BH2UL MMD-AP0244BH2UL, MMD-AP0304BH2UL, MMD-AP0364BH2UL MMD-AP0424BH2UL, MMD-AP0484BH2UL

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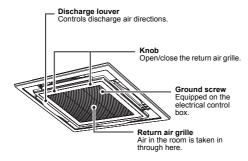
2 Part names

■ Outdoor unit

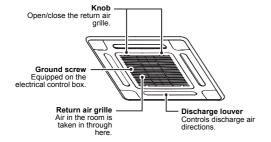


■ Indoor unit

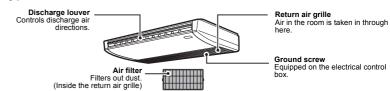
◆4-Way cassette type



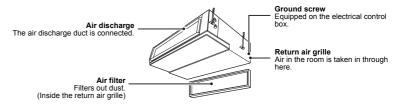
♦ Compact 4-way cassette type



♦ Ceiling type



◆ Medium static ducted type



3. Wired remote control

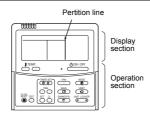
This remote control can control the operation of up to 8 indoor units

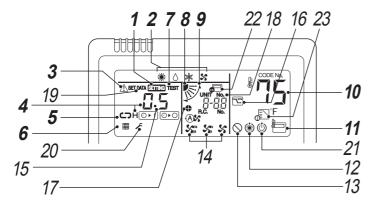
The remote control has two sections: The display section and the operation section.

■ Display section

In the display below all the icons are shown. When the unit is in operation, only relevant icons will be displayed.

- When the circuit breaker is turned on the first time, Samue flashes on the display part of the remote control.
- While this display is flashing, the model is being automatically confirmed. Wait till strike display has disappeared to use the remote control.





1 SETTING display

Displayed during setup of the timer or other settings.

2 Operation mode

The selected operation mode is displayed.

3 Error display

Displayed while the protective device works or a error occurs.

4 Timer display

When a malfunction occurs, an error code is displayed.

5 Timer Mode display

Displays the timer mode

6 Filter display

■, reminder to clean the air filter.

7 TEST run display

Displayed during a test run.

8 Louver position display

Displays louver position.

* Only for 4-way cassette type, Compact 4-way cassette type, Ceiling type, High wall type.

9 Swing display

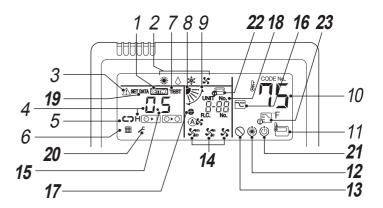
Displayed during up/down movement of the louver.

10 Set temperature display

The selected set temp, is displayed

11 Remote control sensor display

Displayed while the sensor of the remote control is used.



12 Pre-heat display

Displayed when the heating mode is energized or defrost cycle is initiated.

While this indication is displayed, the indoor fan stops.

13 No function display

Displayed when the function requested is not available on that model.

14 Fan speed display

The selected fan speed mode is displayed.

(AUTO)
(HIGH)
(MED.)
(LOW)

15 Louver Number display.

Louvers can be controlled individually. Displays which louver is being set. (exapmle:01, 02, 03, 04)

16 Power saving mode display

Displayed when power saving mode is activated.

17 Louver lock display

Displayed when louver is locked or there is a louver-locked unit in the group.

(4-way cassette type only)

18 UNIT No. display

Displays the number of the indoor unit selected. Also displays error code of indoor and outdoor units

19 SET DATA

Displayed during advanced setting.

20 Service display

Displayed while the protective device works or a trouble occurs.

21 Function unavailable display

Displayed when the requested function is currently unavailable.

22 Central control indicator

Displayed when the air conditioner is controlled centrally and used with central control devices such as the central remote controller.

If the use of the remote controller is prohibited by the central control, blinks when the ON/OFF, MODE, or TEMP. button on the remote controller is pushed, and the buttons do not function. (Settings that can be configured on the remote controller differ depending on the mode of the central control. For details, read the Owner's Manual of the central remote controller.)

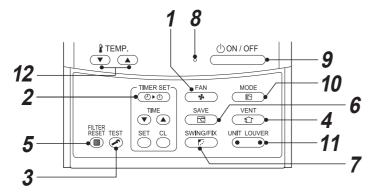
23 Operation mode controlled indicator

Displayed when MODE button is pushed while operation mode is fixed to cool or heat by the air conditioner administrator.

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Push each button to select a desired operation.

• The control saves commands in memory and after the initial setting, there is no need for any additional settings unless changes are desired. The air conditioner can be operated by pushing the ONLOFF button.



1 FAN button

Selects the desired Fan speed.

2 TIMER SET button

Use to setup the timer.

3 button
Use only for service.

(During normal operation, do not use this button.)

4 button

Use when a power ventilation kit (commerciallysupplied) is connected.

 If "

" is displayed on the remote control when pushing the Ventilation button, no vent kit connected.

5 🖁 button

Resets " " display after cleaning filter.

6 SAVE button

Use to activate or deactivate power saving mode.

/ SWING/FIX button

Use to select automatic swing or fixed louver position.

* Not available for duct type.

8 Operation lamp

Green light illuminates when unit is on.
Although it flashes when operating the protection device or an error occurs.

9 button

When the button is pushed, the operation starts, and it stops by pushing the button again.

When the operation has stopped, the operation lamp and all the displays disappear.

10 B button

Selects desired operation mode.

11 wit LOUVER button

Selects a unit number (left) and louver number (right).

UNIT:

Selects an indoor unit when adjusting louver direction when multiple indoor units are controlled with one remote control.

LOUVER:

Selects a louver when setting louver lock or louver direction adjustment independently.

* 4-way cassette type only

12 Dutton

Adjusts the set point.

Select the desired set point by pushing & TEMP. or & TEMP. .

OPTION:

Remote control sensor

Usually the temperature sensor of the indoor unit senses the temperature. The temperature on the surrounding of the remote control can also be sensed. For details, contact the dealer from which you have purchased the air conditioner.

4. Correct usage

When the air conditioner is used for the first time or the setting is changed, follow the steps below. Settings are saved in memory and are displayed anytime the unit is turned on by pushing the observable.

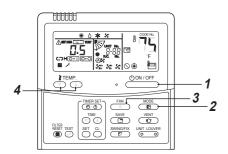
■ Preparation

When the circuit breaker is turned on, the partition lines are displayed on the remote control.

* After the circuit breaker is turned on, the remote control does not accept any commands for approx. 1 minute, this is not a failure.

REQUIREMENT

When the air conditioner is re-powered after it has not been used for a long period, turn on the circuit breaker at least 12 hours before starting the air conditioner.



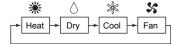
Start

1 Push ON/OFF button.

The operation lamp illuminates, and the operation starts.

2 Select an operation mode with the " B" " button.

The operation mode changes each time the button is pushed in the order shown below.



3 Select fan speed with "FAN button.

The fan speed changes each time the button is pushed in the order shown below.



- When fan is in " (A) Auto", fan speed is adjusted based on difference between set point and room temperature.
- In heating operation, if the room temperature is not heated sufficiently with volume "\$ Low" operation, select "\$ Med." or "\$ High" operation.
- The temperature sensor detects the return air temperature at the indoor unit, which differs from the room temperature depending on the installation condition.

Set point is a target of room temperature. (As "Auto" is not selectable in the Fan mode.)

Select the set point temperature by pushing the "TEMP. ▼" or "TEMP. ▲" buttons.

Stop

Push ON/OFF button.

The operation lamp goes off, and the operation stops In the Cool, Dry, or Auto (cooling) mode, the fan runs for 10 minutes (or more) for self cleaning.

NOTE

Cooling

 If there is a demand for cooling, unit will start approximately 1 minute after mode is selected.

Heating

- If there is a demand for heating, unit will start approximately 3 to 5 minutes after the mode is selected.
- After the heating operation has stopped, Fan may continue to run for approx. 30 seconds.
- When the room temperature reaches the set temperature and the outdoor unit stops, the indoor unit fan runs at ultra low speed and the outdoor unit fan runs at low speed.

During defrost operation, the fan stops so that cool air is not discharged. ("*) " Pre-heat is displayed.)

When restarting the operation after stop

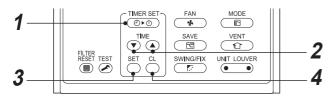
 When attempting to restart the unit immediately after it was stopped, the unit can not start for approx.
 3 minutes this is to protect the compressor.

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5. Timer operation

Three timer modes are available: (Setting of up to 168 hours is enabled.)
 OFF timer : The unit stops when the set time is reached.
 Repeat OFF timer : The unit stops daily when the set time is reached.
 ON timer : The unit starts when the set time is reached.

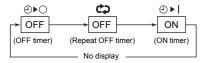
■ Timer operation



Set

1 Push (b) button.

The Timer mode changes each time the button is pushed.



• **SETTING** and timer display flashes.

2 Push \bigcirc TME to select "set time".

With every push of button, the set time increases by 0.5 hr (30 minutes).
 When setting a time more than 24 hours for timer operation, timer can be set in increments of 1 hr.

The maximum set time is 168hr (7 days). The remote control displays the set time with time (between 0.5 and 23.5 hours) (*1) or number of days and time (24 hours or more) (*2) as shown below.

With every push of button, the set time decreases by 0.5 hr (30 minutes) (0.5 - 23.5 hours) or 1 hr (24 - 168 hours).

Example of remote control display

. In the case of 23.5 hours (*1)



• In the case of 34 hours (*2)



3 Push ^{SET} button.

SETTING display disappears and timer time display goes on, and ○▶ or ○▶ odisplay flashes.

 NA leap ON times in activated times time. ON.

(When ON timer is activated, timer time, ON timer $\bigcirc \blacktriangleright \bigcirc$ are displayed and other displays disappear.)

4 Cancel of timer operation

Push button.
Timer display disappears.

NOTE

- When the operation stops after the timer reached the preset time, the Repeat OFF timer resumes the operation by pushing OONLOFF button and stops the operation after the time of the timer has reached the set time.
- When simple is pushed while the OFF timer function of the air conditioner is active, the indication of the timer function disappears and then appears again after about 5 seconds.

This is due to normal processing of the remote control.

6 Installation

■ Location

- · Avoid installing near machines emitting high frequency waves.
- Not suitable for chemical plants such as liquefied carbon dioxide refrigerant plants.
- Places where iron or other metal dust is present. If iron or other metal dust adheres to or collects on the interior
 of the air conditioner, it may spontaneously combust and start a fire.
- A failure may occur in certain locations such as the following:
 - · Areas with large amount of oil droplets (including machine oil) or vapors
 - · Salty areas near oceans, etc.
- · Hot springs emitting sulfidizing gas.
- · Heavily acidic or alkaline places.

Special maintenance or parts are required for use in the above places. For details, contact the dealer where you purchased the product.

- · Leave an enough space around the air intake and outlet of the outdoor unit so that the ventilation is not restricted.
- · Avoid places where strong wind may blow against the air intake and discharge of the outdoor unit.
- Attach a snow stand, snow hood, etc. to the outdoor unit for use in snowfall areas. For details, contact the dealer where you purchased the product.
- · Make drain water from the outdoor unit is emitted into places with good drainage.
- Attach the air filter to the indoor unit. If not, dust may accumulate on the heat exchanger or other parts in the air conditioner and cause a water leak.
- Keep a distance of at least 3.3ft (1m) between the air conditioner/remote control and a TV or radio. Failure to
 observe this precaution may cause visual disturbance or noise.
- Leave a distance of at least 4.9ft (1.5 m) between the air outlet and a fire alarm. If this precaution is not observed, the alarm may not work properly or detect fire in case of fire.

■ Be careful of operation sounds

- · Locate the unit in a place secure enough so that the sounds and vibrations do not increase.
- If something is placed near the air discharge of the outdoor unit, noise may increase.
- · Do not disturb neighbors with cool/warm air or noise coming from the air discharge of the outdoor unit.

7 Air conditioner operations

■ Check before operation

- Turn on the power switch at least 12 hours before starting operation.
- · Connect the earth wire securely.
- · Attach the air filter to the indoor unit.

■ Heating performance

- A heat pump system, which gathers outside heat and emits it into a room, is used for heating. When the outside air temperature falls, the heating capacity of the unit is reduced.
- When the outside temperature is low, it is recommended that other heating equipment is used.

■ Defrosting during heating

- If frost falls on the outdoor unit during heating, defrosting is automatically performed (for approximately 2 - 10 minutes) to increase the heating effect.
- The fan of the indoor unit is stopped during defrosting.

■3-minute protection

The outdoor unit will not operate for approximately 3 minutes after the air conditioner has been immediately restarted after stopping, or the power switch has been turned on. This is to protect the system.

■ Auto restart

The unit will stop after a power failure.

 The unit will restart automatically in the same operating mode as before the power failure when the power is restored.

■ Fan rotation of a stopped indoor unit

 While other indoor units operate, the fans on indoor units in stand-by mode rotate for several minutes approximately once per one hour to protect the machines.

■ Protective device (High pressure switch)

The high pressure switch stops the air conditioner automatically when excessive load is applied to the air conditioner

If the protective device activates, the unit's running stops and the operation lamp blinks.

When the protective device activates, the $\,\mathcal{F}\,$ indicator and the check code are displayed on the remote control.

The protective device may activate in the following cases:

During cooling

- When the air intake or air discharge of the outdoor unit is blocked.
- When strong wind blows continuously against the air outlet of the outdoor unit.

During heating (for heat-pump model only)

- When dust or dirt is excessively adhered to the air filter of the indoor unit.
- When the air outlet of the indoor unit is blocked.

NOTE

When the protective device activates, turn off the power switch, remove the cause, and then restart running.

■ Cooling/Heating operations

Each unit can be controlled individually. However, indoor units connected to the same outdoor unit cannot perform cooling and heating simultaneously. When simultaneous operation is attempted, indoor units performing cooling are stopped, and the running preparation indicator (i) is displayed on the remote control.

An indoor unit performing heating continues running. When an operation is attempted without the configured settings, the running preparation indicator (1) is displayed on the remote control and operation stops. If operation is fixed to cooling or heating by the air conditioner administrator, only the configured settings apply to the operation.

■ Characteristics of heating

- Air does not come out immediately after heating starts.
- Heated air comes out after 3 to 5 minutes (depending on the room/outside temperatures), after the indoor heat exchanger warms up.
- When the outside temperature increases, the outdoor unit may stop.

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8

Louver direction

NOTE

- To improve the cooling/heating performance, change the louver angle for each operation.
- · This function is not available for duct type units.

The characteristics of air: Cool air falls, and warm air rises.



Point the louver horizontally during cooling If pointing downward for cooling, dew may form on the surface of the air discharge or louver and may drop down.

NOTE

- If pointing horizontally for cooling, dew may form on the surface of the cabinet or louver and may drop down.
- If pointing horizontally for heating, the room temperature may be uneven.
- Do not handle the louver manually.
 Doing so may cause a failure.
 Use the SWING/FIX button on the remote control to
 adjust the angle.

■ 4-way cassette type, ceiling type

◆ To set the louver direction

Push the button during running.
The louver direction changes with each push of the button.

▼ For heating (For heat-pump model only)

Point the louver downward. If not pointing downward, hot air may not reach the floor.



▼ For cooling

Point the louver horizontally. If pointing downward, dew may form on the surface of the air discharge port and may drop down.



▼ For fan

Select a wind direction.



♦ To start swinging

Push the SWINGFIX button repeatedly to set the louver direction to the lowest position, then push SWINGFIX again.

The SWING \mathcal{J} indicator is displayed and the louver begins swinging.

▼ In all operations



♦ To stop swinging

- Push the button at the desired position while the louver is swinging.
 - Push the button repeatedly to change the louver position again.
 - * However, even if the button is pushed while the louver is swinging, one of the indications below may sometimes be displayed and may not set the louver to the highest position.

▼ Indications when swinging is stopped



In this case, push the SWINGFIX button again after 2 seconds.

 In Cool/Dry operation, the louver does not stop as it directs downward. If stopping the louver as it directs downward during swing operation, it stops after moving to the third position from the highest position.

▼ Indications when swinging is stopped



♦ Unit select

- When two or more indoor units are controlled with one remote control, the louver direction can be set for each indoor unit by selecting them individually.
- To set louver direction individually, push the button (left side of the button) to display an indoor unit number in the control group. Then set the louver direction of the displayed indoor unit.
- When no indoor unit number is displayed, all indoor units in the control group can be controlled simultaneously.
- Each time the LOUVER (left side of the button) is pushed, the indication changes as follows:

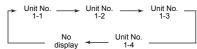


■4-way cassette type only

♦ To set the louvers individually

1 Push the button (left side of the button) during running to select a unit.

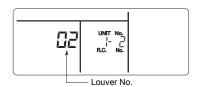
The unit number changes each time the button is pushed.

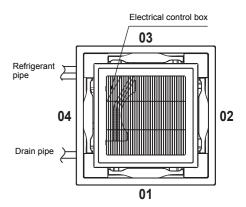


- When no unit number is displayed, all units are selected.
- Push the button (right side of the button) to select a louver.

Each time the button is pushed, the indicator on the left of the remote control changes as follows:

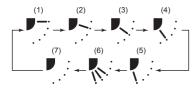
 When no louver number is displayed, all 4 louvers are selected.





3 Push the SWINGFIX button to confirm the direction of the selected louver.

Each time the button is pushed, the indication changes as follows:



* When cooling or drying, (4) and (5) are not displayed.

♦ Setting the swing pattern

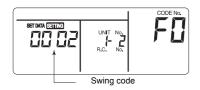
- Push and hold the First FIX for at least 4 seconds while the operation is stopped.
- Push the button (left side of the button) to select a unit.

The unit number changes each time the button is pushed.



The fan of the selected unit runs, and the louver swings.

3 Push the • a buttons to select a swing type.



Swing code	Movement pattern
0001	Standard swing (factory default)
0002	Dual swing
0003	Cyclic swing

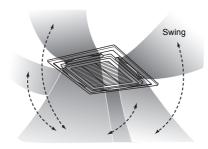
REQUIREMENT

Do not set "0000". (The louver may be damaged.)

- **4** Push the ^a button.
- **5** Push the 👺 button to finish the setting.

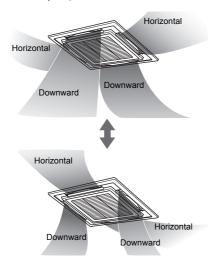
▼ Standard swing

All four louvers swing simultaneously at the same angle.

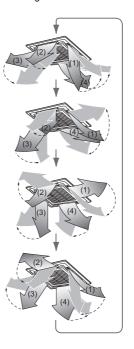


▼ Dual swing (Recommended for heating)

- Adjoining louvers alternately point horizontally and downward to heat the room evenly.
- Air blown downward reaches the floor, and air blown horizontally is spread to circulate heat.



▼ Cyclic swing (Recommended for cooling)
All four louvers swing at different times like waves.



◆ Setting the louver lock

1 Push and hold the () button (right side of the button) for at least 4 seconds while running is stopped.

SETTING blinks.

- When no unit number is displayed, all units are selected
- Push the button (left side of the button) to select a unit.

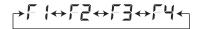
The unit number changes each time the button is pushed.



The fan of the selected unit runs, and the louver swings.

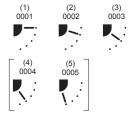
Push the "TEMP. " a" buttons to display the number of the louver to fix its direction.

The selected louver swings.

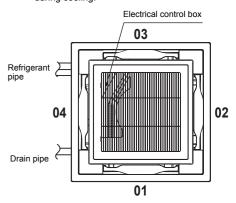


4 Push the

buttons to select the direction of the louver you do not want to swing.

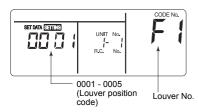


 If (4) or (5) is selected, condensation may occur during cooling.



Push the button to confirm the setting. When the setting is confirmed, the mark lights up.

(To set the louver lock of another unit, repeat from Step 2. To set another louver lock of the same unit, repeat from Step 3.)



* F1 appears in the CODE No. section on the remote control. This indicates that the louver 01 shown in the following figure is selected.

NOTE

Even in louver lock mode, the louver temporarily moves in the following cases:

- · When the air conditioner is stopped
- · When heating starts
- When defrosting
- When thermo, off.

♦ Releasing the louver lock

Set "0000" in Step 4 of "Setting the louver lock".

The \$\text{mark disappears.}

* Steps 1 - 3 and 5, 6 of "Setting the louver lock" also apply to releasing the lock.

♦ Adjusting the horizontal direction

Push and hold the and "TEMP. . . . " buttons for at least 4 seconds while running is stopped.

SETTING blinks.

"01" appears in CODE No.

2 Push the button (left side of the button) to select a unit

The unit number changes each time the button is pushed.



The fan of the selected unit runs, and the louver swings.

- **3** Push the "TEMP. " buttons to change the CODE No. to "45".
- 4 Push the "TIME buttons to select a direction.

Direction SET DATA	Direction setting
"0000"	Smudging reduction position (reduces ceiling smudging)
"0002"	Cold draft preventive position (Prevent cold draft) [Factory default]

- 5 Push the button to check the settings. The indicator stops blinking and stays lit, and the settings are confirmed.
- 6 Push 🖔 button to finish the setting.
 - * If the cold draft position is selected, the ceiling smudging reduction effect will be reduced.

■ 4-way cassette type

▼ When cooling

Point the louver horizontally.



▼ When heating (for heat-pump model only)
Point the louver downward.



- The louver automatically closes when running is stopped.
- In pre-heating mode, the louver points upward.
 The swing indication appears on the remote control
 even in pre-heating mode, but the actual swing starts
 only after pre-heating is complete.

▼ 2-way and 3-way air discharge

The air discharge can be changed to the 2-way or 3-way type to suit the room shape and style. For details, contact the dealer where you purchased the air conditioner.

■ Ceiling type

Vertical adjustment

▼ When cooling

Point the louver horizontally to send cool air across the entire room.



▼ When heating (for heat-pump model only)

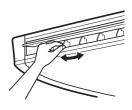
Point the louver downward to send heated air to the floor.



- The louver automatically points upward when running is stopped.
- In pre-heating mode, the louver points upward.
 The swing indication appears on the remote control even in pre-heating mode, but the actual swing starts only after pre-heating is complete.

Horizontal adjustment

When adjusting louver direction horizontally, point the vertical grille inside the horizontal louver in preferred direction.



♦ Unit select

- When two or more indoor units are controlled with one remote control, the louver direction can be set for each indoor unit by selecting them individually.
- To set louver direction individually, push the button (left side of the button) to display an indoor unit number in the control group. Then set the louver direction of the displayed indoor unit.
- When no indoor unit number is displayed, all indoor units in the control group can be controlled simultaneously.
- Each time the UNIT LOUVER (left side of the button) is pushed, the indication changes as follows:



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9 Power saving mode

Push button during operation.

- The air conditioner enters power saving mode.
- 🔁 appears on the display.

Power saving mode will stay in effect until it is cancelled.

To cancel the power saving mode, push Button again.

• 🔁 disappears.

NOTE

- Power saving mode consumes less energy, but may not heat/cool the room as much as normal mode.
- Even when operation start/stop, operation mode change, or power reset is performed during the power saving mode, the power saving mode is retained until the next operation.

10Performance

To save energy and perform comfortable cooling and heating

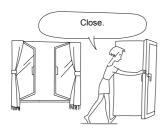
Clean the air filter often

 A clogged air filter lowers the cooling/heating performance.



Close windows and doors

· Do not let cooled/heated air escape from the room.



Do not cool/heat too much

⚠ WARNING

Do not expose your body to cool air directly for a long time and do not cool yourself excessively. Doing so may result in deteriorated physical condition and ill health.

Cooling/Heating too much is bad for your health.
 In particular, take care with handicapped/old people and children.



Cool/Heat the room evenly

Adjust the air direction with the louver.
 Exposing yourself to blowing air directly for a long time is bad for your health.



Air conditioner operating conditions

For proper performance, operate the air conditioner under the following temperature conditions:

	Outdoor temperature	: 23 °F to 109.4 °F (-5 °C to 43 °C) *
Cooling operation	Room temperature	. 69.8 °F to 89.6 °F (21 °C to 32 °C) (Dry bulb temperature), 59 °F to 75.2 °F (15 °C to 24 °C) (Wet bulb temperature)
	[CAUTION] Room this fig	relative humidity – less than 80 %. If the air conditioner operates in excess of ure, condensation may occurs on the surface of the air conditioner.
Heating operation	Outdoor temperature	: 5 °F to 59.9 °F (-15 °C to 15.5 °C) (Wet bulb temperature)
nealing operation	Room temperature	: 59 °F to 82.4 °F (15 °C to 28 °C) (Dry bulb temperature)

If air conditioner is used outside of the above conditions, safety protection may activate.

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11 Maintenance

WARNING

Cleaning the air filter and other parts of the air filter involves dangerous work in high places, ask a service person to do it.

Do not attempt to do it by yourself.

To avoid the possibility of electric shock, always turn off power to the system before performing any cleaning or maintenance to the system. Turn off the outdoor disconnect switch located near outdoor unit. Operating the system with dirty filters may damage the indoor unit and could cause reduced cooling performance.

Periodic Maintenance - periodic maintenance is recommended to ensure proper operation of the unit. Recommended maintenance intervals may vary depending on the installation environment, e.g. dusty zones. Refer to table below.

Periodic Maintenance

INDOOR UNIT	EVERY MONTH	EVERY 4 MONTHS	EVERY YEAR
Clean Air Filter*1	1		
Clean Drain Pan		1	
Clean indoor heat exchanger*2			1
Clean fan* ²			1
Change Remote Control Batteries			1
OUTDOOR UNIT	EVERY MONTH	EVERY 4 MONTHS	EVERY YEAR
Clean Outdoor heat exchanger from Outside		1	
Clean Outdoor heat exchanger from Inside*2			1
Blow Air Over Electric Parts*2			1
Check Electric Connection Tightening*2			1
Clean Fan Wheel*2			1
Check Fan Tightening*2			1
Clean Drain Pans* ²			1

^{*1:} Increase frequency in dusty zones.

■ 4-way cassette type

REQUIREMENT

Clean the heat exchanger with pressurized water.

If a commercially available detergent (strong alkaline or acid) cleaning agent is used, the surface treatment of the heat exchanger will be marred, which may degrade the self cleaning performance.

For further details, contact the dealer.

Replacing antibacterial glass

Request your dealer to replace the antibacterial glass every 10000 hours of cooling operation.

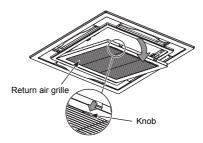


Part code	43179152

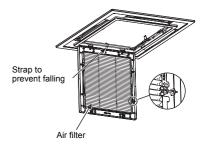
Cleaning the air filter

If \blacksquare is displayed on the remote control, clean the air filter

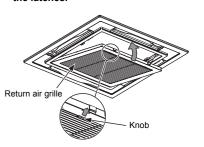
1 Open the return air grille by sliding the latches. Let the grille drop while holding it.



2 Remove the air filter from grille.



- **3** Vacuum the filter and rinse it with water.
- **4** Dry the filter.
- 5 Wipe the inside of the return air grille with water or mild detergent and then dry it.
- 6 Reinstall the filter.
- 7 Close the grille and secure it to the frame by the latches.



8 Push button to reset filter timer. "FILTER III" disappears.

♠ CAUTION

Do not start the air conditioner while leaving the panel and air filter removed.

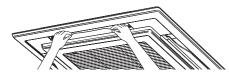
^{*2:} Maintenance to be carried out by qualified service personal.

Cleaning Unit Grille and Frame

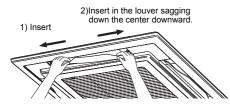
To clean the grille and the frame, wipe the outside with a soft, dry cloth. If necessary, a mild liquid detergent can be applied and wiped off with a dry cloth.

Cleaning The Louvers

1 Remove the discharge louver by holding it at both ends and pulling downwards towards the center.



- 2 Clean the louvers with water or mild detergent.
- 3 Mount the discharge louver by inserting one end and bending it outwards to allow the other end to be inserted.



NOTE

Install the louvers as side with marking faces upwards.

Preparing for long Shut Down Period

- 1 Clean the filters and reposition them in unit.
- 2 Operate the unit in fan mode for 3 or 4 hours to dry all internal parts.
- 3 Turn the unit off and disconnect the main power supply.
- 4 Before unit is turned on again, make sure the circuit breaker has been turned on for at least 12 hours.

■ Ceiling cassette type

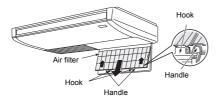
Cleaning the air filter

If \blacksquare is displayed on the remote control, clean the air filter.

1 Open the return air grille by sliding the latches. Let the grille drop while holding it.



2 Remove the air filter from grille.



- **3** Vacuum the filter and rinse it with water.
- 4 Dry the filter.
- 5 Wipe the inside of the return air grille with water or mild detergent and then dry it.
- 6 Reinstall the filter.
- 7 Close the grille and secure it to the frame by the latches.



8 Push button to reset filter timer. "FILTER **m**" disappears.

CAUTION

Do not start the air conditioner while leaving the panel and air filter removed.

Cleaning Unit Grille and Frame

To clean the grille and the frame, wipe the outside with a soft, dry cloth. If necessary, a mild liquid detergent can be applied and wiped off with a dry cloth.

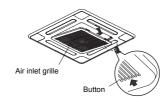
Preparing for long Shut Down Period

- 1 Clean the filters and reposition them in unit.
- 2 Operate the unit in fan mode for 3 or 4 hours to dry all internal parts.
- 3 Turn the unit off and disconnect the main power supply.
- 4 Turn on the circuit breaker for at least 12 hours before unit is turned on again.

■ Compact 4-way cassette type

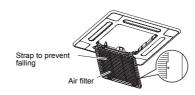
1 Open the air inlet grille.

Slide the air inlet grille buttons to detach the air inlet grille from the main ceiling panel. Lower the grille slowly whilst holding.



2 Take out the air filter.

Push the extrusion of the air filter away from the grille and remove.

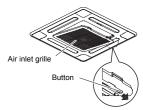


- **3** Cleaning with water or vacuum cleaner
 - If dirt is heavy, clean the air filter using tepid water with a neutral detergent or just water.
 - After cleaning with water, dry the air filter sufficiently in a shaded place.



- 4 Mount the air filter.
- 5 Close the air inlet grille.

Close the air inlet grille, slide the button to locate into the ceiling panel fixing securely.



Push the "FILTER RESET " button.

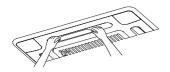
display disappears.

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The air outlet louver can be removed to clean if necessary.

1 Remove the air outlet louver.

Holding both ends of the air outlet louver, remove it by sagging the center downwards.



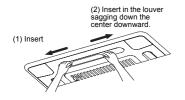
2 Clean the air outlet louver with water.

If dirt is heavy, clean the air outlet louver using tepid water with neutral detergent or just water.



3 Mount the air outlet louver.

First push in the one side, and insert the opposite side by sagging the center downwards.



NOTE

Insert the louver in the correct direction.

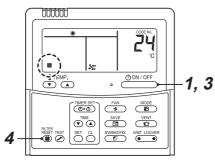
Insert the louver with the printed mark facing upwards, and the arrow on the louver pointing in the outward direction.

■ Medium static ducted type

Air filter replacement

If $\ensuremath{\boxplus}$ is displayed on the remote control, replace the air filter

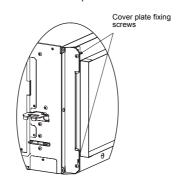
Push the ________ button to stop the operation, then turn off the circuit breaker.

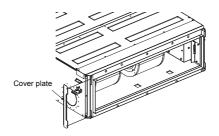


2 Replace the new air filter. (locally procured)

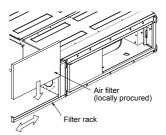
1) Remove the cover plate.

Remove the cover plate with 2 screws.

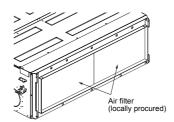




2) Pull out the filter rack, and set the air filter (locally procured) in it.



3) Push the filter rack in fully and reattach the cover plate. (Screws x 2)



- 4 After cleaning, push 🖥.

 iiii display disappears.

ACAUTION

- Do not start the air conditioner while leaving air filter removed.
- Push the filter reset button. (indication will be turn off)

12 Troubleshooting

Check the points described below before asking repair servicing.

		Symptom	Cause
	White misty cold air or water is out. Outdoor unit		Fan of the outdoor unit stops automatically and performs defrost operation.
	Outdoor unit	 Sometimes, noise of air leak is heard. 	Solenoid valve works when defrost operation starts or finishes.
		"Swish" sound is heard sometimes.	When the operation has started, during the operation, or immediately after the operation has stopped, a sound such as water flows may be heard, and the operation sound may become larger for 2 or 3 minutes immediately after the operation has started. They are flowing sound of refrigerant or draining sound of dehumidifier.
		 Slight clacking sound is heard. 	This is sound generated when heat exchanger, etc. expand and contract slightly due to change of temperature.
re.		Discharge air smells.	Various smell such as one of wall, carpet, clothes, cigarette, or cosmetics adhere to the air conditioner.
not a failure.	Indoor unit	• "(j)" indication is lit.	When cooling operation cannot be performed because another indoor unit performs heating operation. Is outdoor temperature out of operation temperature range?
It is		• " indication is lit.	When the manager of the air conditioner has fixed the operation to COOL or HEAT, and an operation contrary to the setup operation is performed.
		"indication is lit. "indication is lit."	When stopping the fan to prevent cool air blow at starting heating.
		Sound or cool air is output from the stand by indoor unit.	 Since refrigerant is flowed temporarily to prevent stay of oil or refrigerant in the stand by indoor unit, sound of flowing refrigerant, may be heard or white steam when other indoor unit operates in HEAT mode, and cold air in COOL mode may be blow-out.
	When power of the air conditioner is turned on, "Ticktock" sound is heard.		Sound is generated when the expansion valve operates when power has been turned on.
	LCD blurs when it is touched.		LCD may temporarily blur by static electricity.
	Fan and louvers of the indoor unit moves when the unit is not operated.		Intermittent operation of the fan with louvers open is sometimes carried out for the refrigerant recovery control of unoperated unit.
	Operates or s	stops automatically.	Is the timer "ON" or "OFF"?
Check again.	Does not operate.		Is it a power failure? Is the power switch turned off? Is the power fuse or breaker blown? Has the protective device operated? (The operation lamp goes on.) Is the timer "ON"? (The operation lamp goes on.) Are COOL and HEAT selected simultaneously? ("①" indication is lit on the display of the remote control.) Is outdoor temperature out of operation temperature range?
	Air is not cooled or warmed sufficiently.		Is the air inlet or air outlet of the outdoor unit obstructed? Are any door or window open? Is the air filter clogged with dust? Is discharge louver of the indoor unit set at appropriate position? Is air selection set to "LOW" "MED", and is the operation mode set to "FAN"? Is the setup temp. the appropriate temperature? Are COOL and HEAT selected simultaneously? ("(j)" indication is lit on the display of the remote control.) Is outdoor temperature out of operation temperature range?

⚠ CAUTION

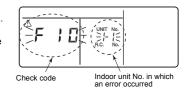
If any of the following conditions occur, turn off the main power supply switch and immediately contact the dealer:

- · Switch operation does not work properly.
- The main power fuse often blows out, or the circuit breaker is often activated.
- A foreign matter or water fall inside the air conditioner.
- When the air conditioner does not operate even after the cause of the protective device activation has been removed. (The operation lamp and \mathcal{F} on the remote control are flashing. When \mathcal{F} and a combination of [E, F, H, L], or [P] and a number are displayed on the remote control, also inform a qualified service person of the display content.)
- · Any other unusual conditions are observed.

Confirmation and check

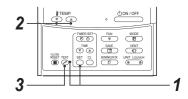
When an error occurred in the air conditioner, the check code and the indoor unit No. appear on the display part of the remote control. The check code is only displayed during the operation.

If the display disappears, operate the air conditioner according to the following "Confirmation of error log" for confirmation.



Confirmation of error log

When an error occurred on the air conditioner, the error log can be confirmed with the following procedure. (The error log is stored in memory up to 4 errors.) The log can be confirmed from both operating status and stop status.



Procedure	Description			
1	When stand buttons are pushed simultaneously for 4 seconds or more, the following display appears. If [F Service check] is displayed, the mode enters in the error log mode. • [01: Order of error log] is displayed in CODE No. window. • [Check code] is displayed. • [Indoor unit address in which an error occurred] is displayed in UNIT No			
2	Every pushing of [) /] button used to set temperature, the error log stored in memory is displayed in order. The numbers in CODE No. indicate CODE No. [01] (latest) to [04] (oldest). CAUTION			
	Do not push button because all the error log of the indoor unit will be deleted.			
3	After confirmation, push 👺 button to return to the usual display.			

- 1. Check the errors according to the above procedure.
- 2. Ask an authorized dealer or qualified service (maintenance) professional to repair or maintain the air conditioner.
- 3. More details of the check code are explained in Service Manual.

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