TOSHIBA
Carrier
AIR CONDITIONER (MULTI TYPE)
Owner’s Manual

Outdoor Unit
Model name:

<Heat Pump Model>

MMY-MAP0724HT9UL
MMY-MAP0964HT9UL
MMY-MAP1144HT9UL
MMY-MAP0724HT6UL
MMY-MAP0964HT6UL
MMY-MAP1144HT6UL
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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**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, reset 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 exposure to a combustible gas. If a combustible gas leaks and becomes concentrated in 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.

**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. 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.
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 working 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 intake 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 used in a closed room, ventilate the room adequately. Poor ventilation may cause oxygen shortage.
- Do not expose your body to cool air directly for a long time and do not cool yourself excessively.
- 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 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 outdoor unit's toppling over, do not approach the outdoor unit but set the circuit breaker to the OFF position, and contact 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.

CAUTION

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

<table>
<thead>
<tr>
<th>Warning indication</th>
<th>Description</th>
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#### WARNING

**ELECTRICAL SHOCK HAZARD**

Disconnect all remote electric power supplies before servicing.

#### CAUTION

**High temperature parts.**

You might get burned when removing this panel.

#### EXPLOSION HAZARD

**RISQUE D'EXPLOSION**

System under pressure. Remove all electric power supplies before servicing. Use all service ports. Open only as necessary. Inform the heating service department,

Do not use this unit for residential or commercial use.

#### SERVICE

**USE ONLY R-410A REFRIGERANT AND COMPRESSOR OIL.** Refer to the product literature before installing or servicing the unit.

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

#### Examples of indication on the carton

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
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<tr>
<td>![Keep dry]</td>
<td>Keep dry</td>
</tr>
<tr>
<td>![Do not drop]</td>
<td>Do not drop</td>
</tr>
<tr>
<td>![Fragile]</td>
<td>Fragile</td>
</tr>
<tr>
<td>![Do not lay down]</td>
<td>Do not lay down</td>
</tr>
</tbody>
</table>

#### Stacking height

11 cartons

([12 cartons can be stacked in this case])

#### This side up

11 cartons

#### Do not step

11 cartons

#### Handle with care

11 cartons

### Connectable indoor units

#### Model type | Model Name
--- | ---
4-way cassette type | MMU-AP182H2UL, MMU-AP0212H2UL, MMU-AP0242H2UL
| MMU-AP032H2UL, MMU-AP036H2UL, MMU-AP042H2UL
| MMU-AP0212H2UL, MMU-AP0242H2UL
| MMU-AP032H2UL, MMU-AP036H2UL, MMU-AP042H2UL
| MMU-AP0212H2UL, MMU-AP0242H2UL
| MMU-AP032H2UL, MMU-AP036H2UL, MMU-AP042H2UL
| MMU-AP0212H2UL, MMU-AP0242H2UL
| MMU-AP032H2UL, MMU-AP036H2UL, MMU-AP042H2UL
| MMU-AP0212H2UL, MMU-AP0242H2UL
| MMU-AP032H2UL, MMU-AP036H2UL, MMU-AP042H2UL
| MMU-AP0212H2UL, MMU-AP0242H2UL
| MMU-AP032H2UL, MMU-AP036H2UL, MMU-AP042H2UL
| MMU-AP0212H2UL, MMU-AP0242H2UL
| MMU-AP032H2UL, MMU-AP036H2UL, MMU-AP042H2UL

* For details on these models, read the owner’s manuals that come with the indoor units.
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, ** displays on the display part of the remote control.
- While this display is flashing, the model is being automatically confirmed. Wait till ** 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 an 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
   Displays 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 requested function 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.
    (example: 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.
Operation section

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 button.

1. **button**
   Selects the desired Fan speed.

2. **button**
   Use to set up the timer.

3. **button**
   Use only for service.
   (During normal operation, do not use this button.)

4. **button**
   Use when a power ventilation kit (commercially-supplied) 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. **button**
   Use to activate or deactivate power saving mode.

7. **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. **button**
    Selects desired operation mode.

11. **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. **button**
    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 \[\text{Power}\] button.

**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 \[\text{Power}\] button.
   The operation lamp illuminates, and the operation starts.
2. Select an operation mode with the \[\text{Mode}\] button.
   The operation mode changes each time the button is pushed in the order shown below.

   - **Heat**
   - **Dry**
   - **Cool**
   - **Fan**

3. Select fan speed with \[\text{Fan Speed}\] button.
   The fan speed changes each time the button is pushed in the order shown below.

   \[\text{Auto} \to \text{High} \to \text{Med} \to \text{Low}\]

   - When fan is in \[\text{Auto}\], 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 \[\text{Low}\] operation, select \[\text{Med}\] or \[\text{High}\] 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.
   - \[\text{Auto}\] is not selectable in the Fan mode.

4. Select the set point temperature by pushing the \[\text{Temp.} \text{CL}\] or \[\text{Temp.} \text{Hi}\] buttons.

Stop

Push \[\text{Power}\] 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. (\[\text{Pre-heat}\] 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.
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

1. Push button.
   The Timer mode changes each time the button is pushed.

2. Push button 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 168 hr (7 days).
   - The remote control displays the set time with time (between 0.5 and 23.5 hours) (*) or number of days and time (24 hours or more) (**) 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 (**)

3. Push button.
   - and display disappears and timer time display goes on, and or display flashes.
   - (When ON timer is activated, timer time, ON timer 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 button and stops the operation after the time of the timer has reached the set time.
- When 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 3.3 ft (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 4.9 ft (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.

## 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 is displayed on the remote control.

- 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.

- Defrosting during heating
  - When the protective device activates, the unit’s running stops and the operation lamp blinks.
  - 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.

## Characteristics of heating
- Fan rotation of a stopped indoor unit
  - 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.

## Protective device
- (High pressure switch)
  When the protective device activates, turn off the power switch, remove the cause, and then restart running.
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.

![CAUTION](image)

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](image)

• If pointing horizontally for cooling, dew may form on the surface of the cabinet or louver and may drop down.
• 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
1 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
1 Push the button repeatedly to set the louver direction to the lowest position, then push again.
The SWING indicator is displayed and the louver begins swinging.

• In all operations

To stop swinging
1 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

1 Push the button again.

2 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 louver are selected.

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 the louver direction 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.

2 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 unit number is displayed, all units are selected.

4-way cassette type only

To set the louver individually
1 Push the button during running to select a unit.
The unit number changes each time the button is pushed.

2 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 louver are selected.
Push the 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
1. Push and hold 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.
2. Push the buttons to select the swing type.

3. Push the button to confirm the setting.
4. Push the button to finish the setting.

◆ Setting the louver lock
1. Push and hold the button (right side of the button) for at least 4 seconds while running is stopped.
   • When no unit number is displayed, all units are selected.
   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.

◆ Cyclic swing (Recommended for cooling)
All four louvers swing at different times like waves.
Push the button to finish the setting.

* 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 mark disappears.

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

### Adjusting the horizontal direction
1. Push and hold the and “TEMP.  " buttons for at least 4 seconds while running is stopped.
   The indicator 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.

#### Direction SET DATA

<table>
<thead>
<tr>
<th>Direction setting</th>
<th>Direction setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>“0000”</td>
<td>Smudging reduction position (reduces ceiling smudging)</td>
</tr>
<tr>
<td>“0002”</td>
<td>Cold draft preventive position (Prevent cold draft) [Factory default]</td>
</tr>
</tbody>
</table>

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

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 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 button (left side of the button) is pushed, the indication changes as follows:

### Ceiling type

#### Vertical adjustment

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

10 Performance

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.

Air conditioner operating conditions

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

<table>
<thead>
<tr>
<th>Condition</th>
<th>Outdoor temperature</th>
<th>Room temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling</td>
<td>-23°F to 109.4°F (15°C to 43°C)</td>
<td>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)</td>
</tr>
<tr>
<td>Heating</td>
<td>5°F to 59.9°F (-15°C to 15.5°C) (Wet bulb temperature)</td>
<td>59°F to 82.4°F (15°C to 28°C) (Dry bulb temperature)</td>
</tr>
</tbody>
</table>

[CAUTION] Room relative humidity – less than 80%. If the air conditioner operates in excess of this figure, condensation may occur on the surface of the air conditioner.

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

<table>
<thead>
<tr>
<th>INDOOR UNIT</th>
<th>EVERY MONTH</th>
<th>EVERY 4 MONTHS</th>
<th>EVERY YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Air Filter*1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Clean Drain Pan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean indoor heat exchanger*2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean fan*2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Remote Control Batteries</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTDOOR UNIT</th>
<th>EVERY MONTH</th>
<th>EVERY 4 MONTHS</th>
<th>EVERY YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Outdoor heat exchanger from Outside</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean Outdoor heat exchanger from Inside*2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blow Air Over Electric Parts*2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check Electric Connection Tightening*2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean Fan Wheel*2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check Fan Tightening*2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean Drain Parts*2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1: Increase frequency in dusty zones.
*2: Maintenance to be carried out by qualified service personal.

---

**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.

**Cleaning the air filter**
If 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 " 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.

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 M 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.

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.
2. Take out the air filter.
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. Push the “FILTER RESET” button.
   “FILTER M” display disappears.
5. Install the air filter.
6. Push the return air grille latch. Let the grille drop while holding it.
7. Close the return air grille.
8. Push button to reset filter timer.
   “FILTER M” disappears.
Cleaning of air outlet louver
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 the filter indicator is displayed on the remote control, replace the air filter:

1. 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)

3. Turn on the circuit breaker, then push the [ ] button on the remote control to start the operation.

4. After cleaning, push [ ] .
   Display disappears.

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

Check the points described below before asking repair servicing.

<table>
<thead>
<tr>
<th>symptom</th>
<th>cause</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outdoor unit</strong></td>
<td></td>
</tr>
<tr>
<td>• White misty cold air or water is out.</td>
<td>• Fan of the outdoor unit stops automatically and performs defrost operation.</td>
</tr>
<tr>
<td>• Sometimes, noise of air leak is heard.</td>
<td>• Solenoid valve works when defrost operation starts or finishes.</td>
</tr>
<tr>
<td><strong>Indoor unit</strong></td>
<td></td>
</tr>
<tr>
<td>• “Swish” sound is heard sometimes.</td>
<td>• 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.</td>
</tr>
<tr>
<td>• Slight clacking sound is heard.</td>
<td>• This is sound generated when heat exchanger, etc. expand and contract slightly due to change of temperature.</td>
</tr>
<tr>
<td>• Discharge air smells.</td>
<td>• Various smell such as one of wall, carpet, clothes, cigarette, or cosmetics adheres to the air conditioner.</td>
</tr>
<tr>
<td>• “” indication is lit.</td>
<td>• 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.</td>
</tr>
<tr>
<td>• “” indication is lit.</td>
<td>• When the timer “ON” or “OFF”?</td>
</tr>
<tr>
<td>• “” indication is lit.</td>
<td>• When stopping the fan to prevent cool air blow at starting heating.</td>
</tr>
<tr>
<td>• Sound or cool air is output from the stand by indoor unit.</td>
<td>• 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.</td>
</tr>
<tr>
<td>• When power of the air conditioner is turned on, “Ticktock” sound is heard.</td>
<td>• Sound is generated when the expansion valve operates when power has been turned on.</td>
</tr>
<tr>
<td>• LCD blurs when it is touched.</td>
<td>• LCD may temporarily blur by static electricity.</td>
</tr>
<tr>
<td>• Fan and louvers of the indoor unit moves when the unit is not operated.</td>
<td>• Intermittent operation of the fan with louvers open is sometimes carried out for the refrigerant recovery control of unoperated unit.</td>
</tr>
</tbody>
</table>

## 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.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When and buttons are pushed simultaneously for 4 seconds or more, the following display appears. Set [Fan] or [Service check] is displayed, the mode enters in the error log mode. (&lt;01: Order of error log&gt; is displayed in CODE No. window. &lt;Check code&gt; is displayed. &lt;Indoor unit address in which an error occurred&gt; is displayed in UNIT No.)</td>
</tr>
<tr>
<td>2</td>
<td>Every pushing of ( ) button used to set temperature, the error log stored in memory is displayed in logical order. The numbers in CODE No. indicate CODE No. (01: latest) to (04: oldest).</td>
</tr>
<tr>
<td>3</td>
<td>After confirmation, push button to return to the usual display.</td>
</tr>
</tbody>
</table>

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.