

TOSHIBA

Leading Innovation >>>

AIR CONDITIONER (MULTI TYPE)

Owner's Manual



Indoor Unit

Model name: _____

Concealed Duct Type Fresh Air Intake Unit

MMD-AP0481HFE

MMD-AP0721HFE

MMD-AP0961HFE

For commercial use

Original instruction

Thank you very much for purchasing TOSHIBA Air Conditioner.
Please read this owner's manual carefully before using your Air Conditioner.

- Be sure to 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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Please read carefully through these instructions that contain important information which complies with the "Machinery" Directive (Directive 2006/42/EC), and ensure that you understand them.

Generic Denomination: Air Conditioner







Definition of Qualified Installer or Qualified Service Person

The air conditioner must be installed, maintained, repaired and removed by a qualified installer or qualified service person. When any of these jobs is to be done, ask a qualified installer or qualified service person to do them for you.

A qualified installer or qualified service person is an agent who has the qualifications and knowledge described in the table below.

Agent	Qualifications and knowledge which the agent must have
Qualified installer	<ul style="list-style-type: none"> • The qualified installer is a person who installs, maintains, relocates and removes the air conditioners made by Toshiba Carrier Corporation. He or she has been trained to install, maintain, relocate and remove the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such operations by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to these operations. • The qualified installer who is allowed to do the electrical work involved in installation, relocation and removal has the qualifications pertaining to this electrical work as stipulated by the local laws and regulations, and he or she is a person who has been trained in matters relating to electrical work on the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work. • The qualified installer who is allowed to do the refrigerant handling and piping work involved in installation, relocation and removal has the qualifications pertaining to this refrigerant handling and piping work as stipulated by the local laws and regulations, and he or she is a person who has been trained in matters relating to refrigerant handling and piping work on the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work. • The qualified installer who is allowed to work at heights has been trained in matters relating to working at heights with the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work.
Qualified service person	<ul style="list-style-type: none"> • The qualified service person is a person who installs, repairs, maintains, relocates and removes the air conditioners made by Toshiba Carrier Corporation. He or she has been trained to install, repair, maintain, relocate and remove the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such operations by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to these operations. • The qualified service person who is allowed to do the electrical work involved in installation, repair, relocation and removal has the qualifications pertaining to this electrical work as stipulated by the local laws and regulations, and he or she is a person who has been trained in matters relating to electrical work on the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work. • The qualified service person who is allowed to do the refrigerant handling and piping work involved in installation, repair, relocation and removal has the qualifications pertaining to this refrigerant handling and piping work as stipulated by the local laws and regulations, and he or she is a person who has been trained in matters relating to refrigerant handling and piping work on the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work. • The qualified service person who is allowed to work at heights has been trained in matters relating to working at heights with the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work.

■ Warning indications on the air conditioner unit

Warning indication		Description
	WARNING ELECTRICAL SHOCK HAZARD Disconnect all remote electric power supplies before servicing.	WARNING ELECTRICAL SHOCK HAZARD Disconnect all remote electric power supplies before servicing.
	WARNING Moving parts. Do not operate unit with grille removed. Stop the unit before the servicing.	WARNING Moving parts. Do not operate unit with grille removed. Stop the unit before the servicing.
	CAUTION High temperature parts. You might get burned when removing this panel.	CAUTION High temperature parts. You might get burned when removing this panel.
	CAUTION Do not touch the aluminum fins of the unit. Doing so may result in injury.	CAUTION Do not touch the aluminum fins of the unit. Doing so may result in injury.
	CAUTION BURST HAZARD Open the service valves before the operation, otherwise there might be the burst.	CAUTION BURST HAZARD Open the service valves before the operation, otherwise there might be the burst.
	CAUTION Do not climb onto the fan guard. Doing so may result in injury.	CAUTION Do not climb onto the fan guard. Doing so may result in injury.

1 Precautions for safety

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 (*1) 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

- When transporting the air conditioner, wear shoes with protective toe caps, protective gloves, and other protective clothing.
- When transporting the air conditioner, do not take hold of the bands around the packing carton. You may injure yourself if the bands should break.
- When 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.
- You shall ensure that the air conditioner is transported in stable condition. If you find any part of the product broken, contact your dealer.

Installation

- Only a qualified installer (*1) or qualified service person (*1) 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 error has occurred in the air conditioner, set the circuit breaker to the OFF position, and contact a service person.
- If you install the unit 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.
- Be sure to use the company-specified products for the separately purchased parts. Use of non-specified products may result in fire, electric shock, water leakage, etc. Have the installation performed by a professional.
- Confirm that earthing is performed correctly.

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 (*1) or qualified service person (*1) 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 when 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, be careful of ventilation to let fresh air enter the room. Poor ventilation causes oxygen shortage.
- When the air conditioner is used in a closed room, be careful of sufficient ventilation of the room. Poor ventilation 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.

- Never insert your finger or a stick into the air intake or discharge. 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 (*1) when the repair includes additional charging of the refrigerant.
- Be sure to 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

- When you have noticed that some kind of error (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 error status may cause mechanical problems to escalate or result in electric shocks, etc.
- If you have discovered that 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 you have discovered that 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 you have discovered that 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, etc.

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

To disconnect the appliance form the main supply

- This appliance must be connected to the mains by means of a switch with a contact separation of at least 3 mm.

Installation fuse (all types can be used) must be used for the power supply line of this air conditioner.

Installation

- Certainly lay the drain hose for perfect draining. Bad drainage may cause flooding in the house and getting furniture wet.
- Make sure to connect the air conditioner to an exclusive power supply of the rated voltage, otherwise the unit may break down or cause a fire.
- Confirm that the outdoor unit are fixed on the base. Otherwise, falling down of the units or other accidents may occur.










Operation


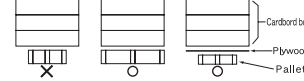
- Do not use this air conditioner for special purpose such as preserving food, precision instruments, art objects, breeding animals, car, vessel, etc.
- Do not touch any switches with wet finger, otherwise you may get an electric shock.
- If the air conditioner will not be used for a considerably long 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 controller. 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.
- Be sure to 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 for cleaning of the air conditioner to be performed by the dealer. Cleaning the air conditioner in an improper manner may cause damage to plastic parts, insulation failure of electric parts, etc. 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.

(*1) Refer to the "Definition of Qualified Installer or Qualified Service Person."

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

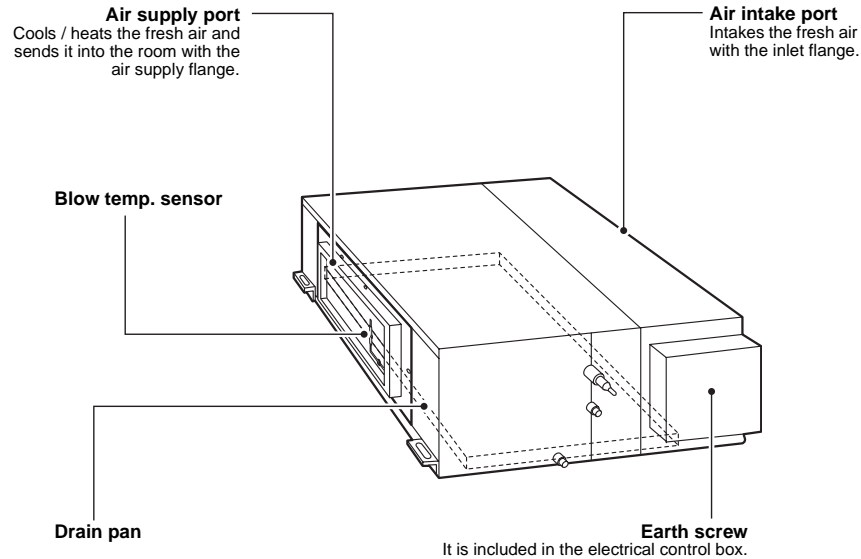
Examples of indication on the carton

Symbol	Description	Symbol	Description	Symbol	Description
	Keep dry		Do not drop		Do not lay down
	Fragile		Stacking height (12 cartons can be stacked in this case)		Do not walk on this carton
	This side up		Do not step		Handle with care

	<p>⚠ Caution Injury possibility. Don't handle with packing band, or may get injured in case of broken band.</p>	<p>Stacking notice. In case that cardboard boxes protrude out of pallet when stacking, lay a 10mm thick plywood over the pallet.</p> 
<p>CAUTION Injury possibility. Don't handle with packing band, or may get injured in case of broken band.</p>		<p>Stacking notice. In case that cardboard boxes protrude out of pallet when stacking. Lay a 10 mm thick plywood over the pallet.</p>

2 Part names

■ Fresh air intake unit

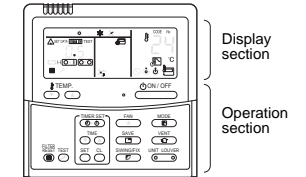


3 Part names and functions of the remote controller

■ Display section

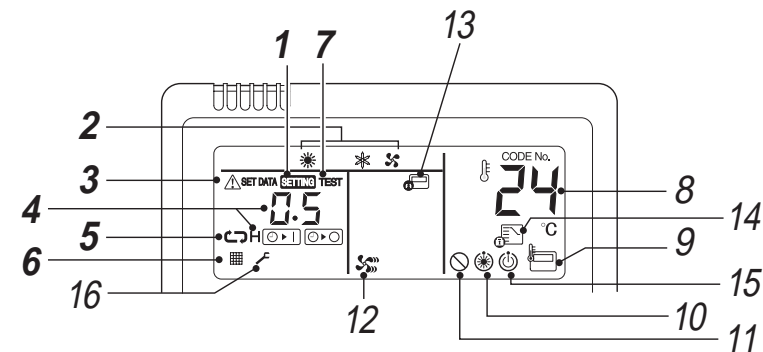
All indicators are displayed in the display example below. Actually, only the selected options will be displayed.

- **SETTING** blinks on the display of the remote controller the first time the power switch is turned on.
- The initial settings progress while **SETTING** is blinking. Start to use the remote controller after **SETTING** has disappeared.



NOTE

The LCD may temporarily be blurred due to static electricity.



1 SETTING indicator

Displayed when setting the timer or other functions.

2 Operation mode indicator

Indicates the operation mode selected.

3 Error indicator

Displayed when the protective device activates or an error occurs.

4 Time display

Indicates time concerning the timer.
(Indicates an error code when an error occurs)

5 Timer mode indicator

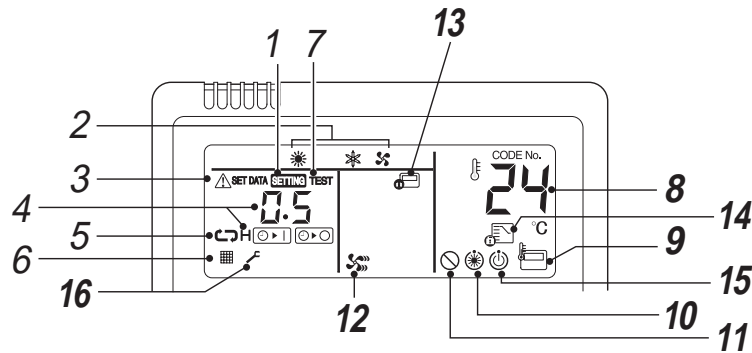
Displays the timer mode.

6 Filter indicator

Reminder to clean the air filter.

7 TEST run indicator

Displayed during test run.



8 Set temperature display

The selected set temperature is displayed.

9 Remote controller sensor indicator

Displayed when the remote controller sensor is used.

10 Pre-heat indicator

Displayed when the heating mode is energized or defrost cycle is initiated. While this indication is displayed, the indoor fan stops or operate in fan mode.

11 No function indicator

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

12 Fan speed indicator

Fan speed is fixed and the indicator is fixed to "High".

13 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, 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.)

14 Operation mode controlled indicator

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

15 Operation ready display

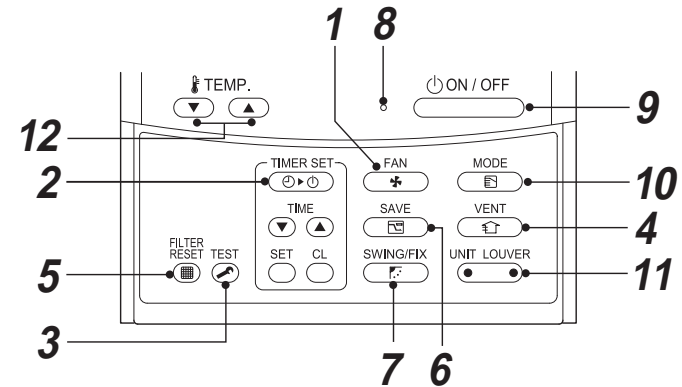
This display appears on some models.

16 Service display

Displayed while the protective device works or an error occurs.

■ Operation section

Once the settings have been configured, all you need to do is push the ON/OFF button from then on.



1 FAN button (Fan speed select button)

Only "High" is displayed.

2 TIMER SET button (Timer set button)

Use to setup the timer.

3 TEST button (TEST button)

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

4 VENT button

Use when a ventilator (commercially-available) is connected. Push the button to turn ON/OFF the ventilator. Turning ON/OFF the air-conditioner also turns ON/OFF the ventilator. * No ventilator is connected if "VENT" appears on the remote controller display after pushing the VENT button.

5 FILTER RESET button (Filter reset button)

Resets "FILTER" indication after cleaning.

6 SAVE button (Power save operation)

No function.

7 SWING/FIX button

No function.

8 Operation lamp

Lights up during running. Blinks when an error occurs or the protective device activates.

9 ON/OFF button

Turns on the unit when pushed, and turns off when pushed again.

10 MODE button (Operation mode select button)

Selects desired operation mode.

11 UNIT LOUVER button (Unit / Louver select button)

UNIT button:

No function.

LOUVER button:

No function.

12 TEMP. button

Adjusts the set temperature.


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

OPTION:

Remote controller sensor

Normally the temperature sensor of the indoor unit senses the temperature. The temperature around the remote controller can also be sensed. For details, contact your dealer.

4 Basic operation

When you use the air conditioner for the first time or change the settings, follow the procedures below.
From next time, pushing the  button starts running of the air conditioner with the chosen settings.

■ Preparation

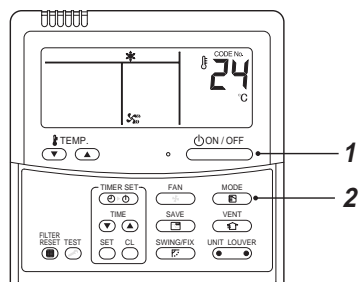
Turn on the power switch



- When turned on, the separation line appears and **SETTING** blinks on the remote controller display.
- * **The remote controller will not work for about 1 minute after turning on the power. This is not a malfunction.**

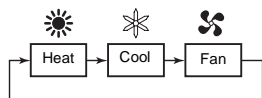
REQUIREMENT


- Keep the power switch turned on during use.
- When you resume using the air conditioner after a long period of disuse, turn on the power switch at least 12 hours before starting running.

■ Operations






- Push the  button.
The operation lamp lights up.
- Push the “MODE ” button to select a operation mode.
Each time you push the button, the operation mode and its icon change in the following order:



- Fan speed is fixed and the indicator is fixed to  “High”.

- Push the  button to stop running.
The operation lamp turns off.

■ Changing the set temperature

- Push the “TEMP. ” buttons.
Push  to increase the temperature, and  to decrease the temperature. (The set temperature cannot be changed in the fan mode.)

Operation mode	Setting range	Factory default
COOL	16 to 27 °C	18 °C
HEAT		25 °C

NOTE

When heating
The air conditioner may continue running in the fan mode for about 30 seconds after stopping heating.

■ Operation mode and function

COOL : Cools the fresh air and sends it into the room
HEAT : Heats the fresh air and sends it into the room
FAN : Sends the fresh air as it is

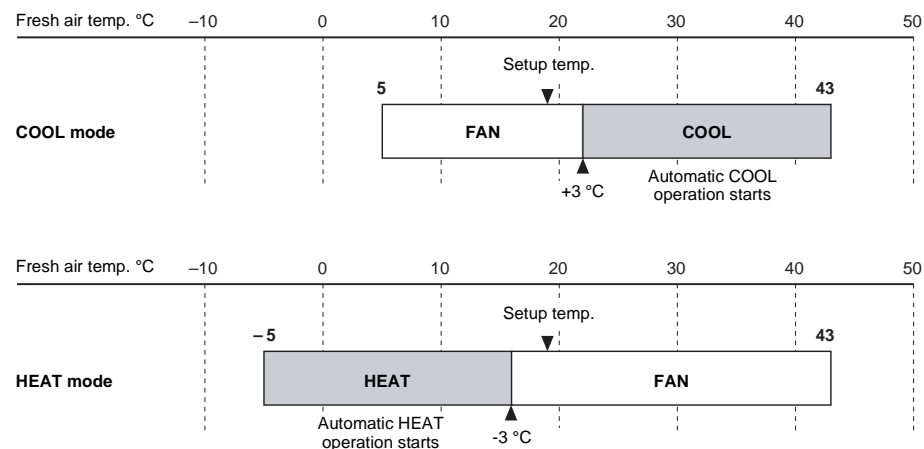
The air conditioner with the fresh air intake unit controls temperature of the supply air so that it is close to the setup temperature of the remote controller.
However temperature of the supply air may not be close to the setup temperature according to temperature of the fresh air or the operation condition of the indoor units for air conditioning in one line.

REQUIREMENT

- The air conditioner with the fresh air intake unit cannot control the room temperature.
- For control of the room temperature, an indoor unit for air conditioning is required separately.

■ Use conditions

- In COOL mode, if temperature of the fresh air is under the setup temp. +3 °C, FAN status is automatically made. When temperature of the fresh air is under 19 °C, FAN status is also made regardless of the setup temperature.
- In HEAT mode, if temperature of the fresh air is over the setup temp. -3 °C, FAN status is automatically made. When temperature of the fresh air is over 15 °C, FAN status is also made regardless of the setup temperature.



REQUIREMENT

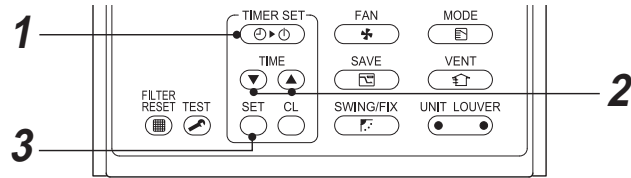
- In “COOL” or “FAN” mode, if temperature of the fresh air is under 5 °C, the operation stops automatically in order to protect the equipment.
In this case, continue the operation by selecting “HEAT” mode.
- In “HEAT” mode, if temperature of the fresh air is under -5 °C, the operation stops automatically in order to protect the equipment.
When operating the air conditioner with the fresh air temp. under -5 °C (minimum -15 °C), set temp. of the fresh air to be taken in to -5°C or upper using a duct heater (locally procured).
For details, consult the dealer which you purchased the air conditioner.

5 Timer operation

Select a timer type from the following three: (Max. 168 hours)

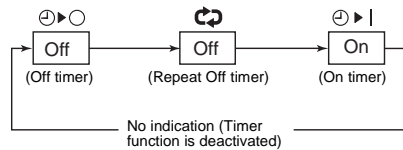
- OFF timer** : Stops running after the specified period.
- Repeat-OFF timer** : Stops running after the specified period every time you use the air conditioner.
- On timer** : Starts running after the specified period.

Setting the timer



1 Push the **TIMER SET** button.

Each time you push the button, the timer mode and indication change in the following order:



- **SETTING** and the time indicator blink.

2 Push the **TIME** buttons to set the period of time until the timer actions.

- The time setting increases in 0.5-hour (30-minute) increments each time you push **▲**. The setting increases in 1-hour increments if it is over 1d (24 hours). The maximum is 7d (168 hours).
On the remote controller, settings between 0.5h and 23.5h (*1) are displayed as is. If it is over 24 hours (*2), the days and hours appear.
- The time setting decreases in 0.5-hour (30-minute) decrements (0.5 hours to 23.5 hours) or 1-hour decrements (24 hours to 168 hours) each time you push **▼**.

Example of remote controller display

- **23.5 hours (*1)**



- **34 hours (*2)**

1d indicates 1 day (24 hours).

1d 10h indicates 10 hours. (Total: 34 hours)



3 Push the **SET** button.

SETTING disappears, the time indication is displayed, and **▶|** or **▶◀** display flashes.

(When using the ON timer, all indications other than the time and **▶|** turn off.)

■ Cancelling the timer

1 Push the **ON/OFF** button.

The timer indicator disappears.

NOTE

- When using Repeat OFF timer, pushing the **ON/OFF** button after stopping by the timer starts running again and the timer will stop the running again after the specified period.
- When using OFF timer, the timer indication temporarily disappears for about 5 seconds by pushing the **SWING/FIX** button. This occurs due to the processing in the remote controller, and is not a malfunction.

6 Installation

■ Location

- Avoid locations where inside the ceiling is used as a route for fresh air.
- Avoid installing near machines emitting high frequency waves.
- Not suitable for chemical plants such as liquefied carbon dioxide refrigerant plants.
- Do not install the air conditioner in locations 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, etc.
 - 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 discharge 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 sure drain water from the outdoor unit is emitted into places with good drainage.
- Make sure the long life prefilter and high-efficiency filter are installed in the filter chamber. If the long life prefilter and high-efficiency filter are not attached, heat exchangers etc. clogged with dust can result in water leakage. Attach the long life prefilter and high-efficiency filter because dust can also get into the area being air conditioned.
- Keep a distance of at least 1 m between the air conditioner / remote controller and a TV or radio. Failure to observe this precaution may cause visual disturbance or noise.
- Leave a distance of at least 1.5 m between the air discharge 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.
- Be careful not to disturb your neighbors with cool / warm air or noise coming from the air discharge of the outdoor unit.

7 Notes on operations and performance

■ Check before operation

- Turn on the power switch at least 12 hours before starting operation.
- Make sure the earth wire is securely connected.
- Make sure the air filter is attached to the indoor unit.

■ 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.

■ Power failure


- In the case of a power failure, all operations stop.
- To resume operations, push the ON/OFF button.

■ Information on the air conditioning control system

- The temperature setting should be between 16 and 27 °C.
- The temperature of the air conditioning system can be set outside of the range of 16 to 27 °C; however, it may interfere with the temperature adjustment of the indoor unit for air conditioning or may cause the device to fail.

■ 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  indicator and the check code are displayed on the remote controller.

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 discharge 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 discharge 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 you attempt simultaneous operation, indoor units performing cooling are stopped, and the running preparation indicator  is displayed on the remote controller.

An indoor unit performing heating continues running. When you attempt an operation without the configured settings, the running preparation indicator  is displayed on the remote controller 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

When the outside temperature increases, the outdoor unit may stop.

8 Maintenance

⚠ WARNING

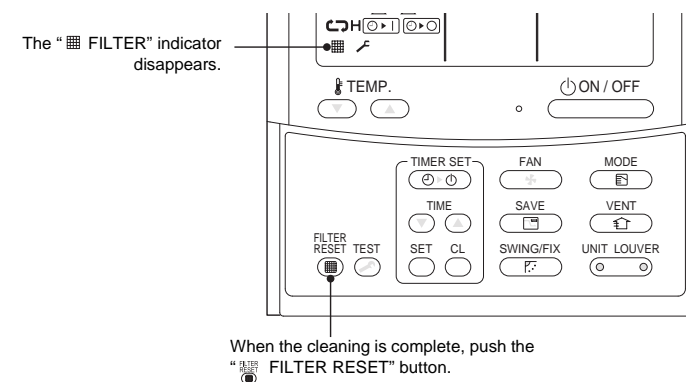
For daily maintenance including Air Filter cleaning, make sure to ask the qualified service person particularly following models as the maintenance requires high-place work;

⚠ CAUTION

Do not push buttons with wet hands. Doing so may result in electric shock.

Cleaning the air filters

- When the filter indicator is displayed on the remote controller, clean the air filters.
- Ask qualified service person to clean the filters for the models listed in the warning on the top of this chapter.
- Clogged filters may lower the cooling and heating performance.



REQUIREMENT

The factory default of the filter indicator is [2500H]. If the filter becomes excessively dirty, change the setting time. Ask your dealer to describe how to change the setting time.

▼ Long life prefilter

Remove dust with a vacuum cleaner or rinse it off with water.

- If excessively dirty, it can be cleaned effectively by washing it with a soft brush and neutral detergent.
- After washing with water, drain off the water and dry it in the shade.

REQUIREMENT

- Do not wash with water that is over 50 °C. This may cause discoloration or deformation.
- Do not expose to fire. Doing so could cause a fire.

▼ High-efficiency filter

Replace it when it is time for replacement.

When cleaning the long life prefilter, check the dust collecting status and the reduction in air volume for the high-efficiency filter, then replace the prefilter when it is time for replacement (approximately 2500 hours of operation is recommended).

Note that the high-efficiency filter cannot be washed with water and reused.

However, the lifetime of the high-efficiency filter may be shortened depending on the intake air condition.

■ Cleaning the indoor unit and remote controller

- Ask qualified service person to clean the indoor units for the models listed in the warning on the top of this chapter.
- Wipe with a dry, soft cloth.
- Do not use benzine, thinner, scouring powder, chemical cloth, etc. as those may cause deformation or breakage.



■ If unused for over a month

- Leave the fan on for half a day or so to dry the inside.
- Turn off the main power switch.
- Clean the air filter and then attach it.

■ Periodic inspection

- After being used for a long period of time, the parts may deteriorate or malfunction, or the drainage may worsen, due to heat, moisture, dust, or general usage.
- In addition to the maintenance, it is recommended that you have a inspection (charges apply) performed by the dealer where you purchased the unit, etc.

■ Before the cooling / heating season

Ask a qualified service person to clean the drain pan.

⚠ CAUTION

Clean the drain pan

Without cleaning, the drain pan may be filled with waste, and water may overflow onto the ceiling or floor.

9 Troubleshooting

When the following symptoms are found, check the points described below before asking repair servicing.

		Symptom	Cause
It is not a failure.	Outdoor unit	<ul style="list-style-type: none"> • White misty cold air or water is out. • Sometimes, noise of air leak is heard. 	<ul style="list-style-type: none"> • Fan of the outdoor unit stops automatically and performs defrost operation. • Solenoid valve works when defrost operation starts or finishes.
	Indoor unit	<ul style="list-style-type: none"> • "Swish" sound is heard sometimes. • Slight clacking sound is heard. • "Ⓜ" indication is lit. • "Ⓜ" indication is lit. • "Ⓜ" indication is lit. • "Ⓜ" indication is lit. • Sound or cool air is output from the stand by indoor unit. • When power of the air conditioner is turned on, "Ticktock" sound is heard. • LCD blurs when it is touched. 	<ul style="list-style-type: none"> • 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. • This is sound generated when heat exchanger, etc. expand and contract slightly due to change of temperature. • When cooling operation cannot be performed because another indoor unit performs heating operation. • Is outdoor temperature out of operation temperature range? • 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. • When stopping the fan to prevent cool air blow at starting heating. • 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. • Sound is generated when the expansion valve operates when power has been turned on. • LCD may temporarily blur by static electricity.
Check again.		Operates or stops automatically.	<ul style="list-style-type: none"> • Is the timer "ON" or "OFF"?
		Does not operate.	<ul style="list-style-type: none"> • 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? ("Ⓜ" indication is lit on the display of the remote controller.) • Is the outside air temperature outside of operating temperature range? The operation is automatically stopped ("Ⓜ" on the remote controller display turns on).
		If only fan operation is performed:	<ul style="list-style-type: none"> • Is the outside air temperature outside of operating temperature range for cooling and heating? The operation is automatically switched to the fan mode.

⚠ CAUTION

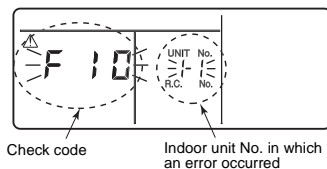
- If any of the following conditions occur, turn off the main power supply switch and immediately contact the dealer:
- Switch operation does not work properly.
 - The main power fuse often blows out, or the circuit breaker is often activated.
 - A foreign matter or water fall inside the air conditioner.
 - When the air conditioner does not operate even after the cause of the protective device activation has been removed. (The operation lamp and \mathcal{P} on the remote controller are flashing. When \mathcal{P} and a combination of E, F, H, L, or P and a number are displayed on the remote controller, 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 controller.

The check code is only displayed during the operation.

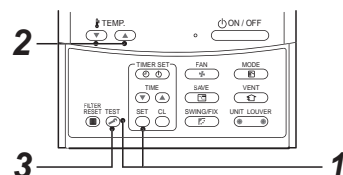
If the display disappears, operate the air conditioner according to the following "Confirmation of error log" for confirmation.



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	<p>When pushing SET and TEST buttons at the same time for 4 seconds or more, the following display appears.</p> <p>If [\mathcal{P} Service check] is displayed, the mode enters in the error log mode.</p> <ul style="list-style-type: none"> • [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	<p>Every pushing of [TEMP / CL] button used to set temperature, the error log stored in memory is displayed in order.</p> <p>The numbers in CODE No. indicate CODE No. [01] (latest) to [04] (oldest).</p> <p>CAUTION Do not push TEST button because all the error log of the indoor unit will be deleted.</p>
3	<p>After confirmation, push SET button to return to the usual display.</p>

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.

10 Specifications

Model	Sound power level (dBA)		Weight (kg) Main unit
	Cooling	Heating	
MMD-AP0481HFE	*	*	93
MMD-AP0721HFE	*	*	144
MMD-AP0961HFE	*	*	144

* Under 70 dBA

Declaration of Conformity

Manufacturer: Toshiba Carrier Corporation
336 Tadehara, Fuji-shi, Shizuoka-ken 416-8521 JAPAN

Authorized Representative / TCF holder: Nick Ball
Toshiba EMEA Engineering Director
Toshiba Carrier UK Ltd.
Porsham Close, Belliver Industrial Estate,
PLYMOUTH, Devon, PL6 7DB.
United Kingdom

Hereby declares that the machinery described below:

Generic Denomination: Air Conditioner

Model / type: MMD-AP0481HFE,
MMD-AP0721HFE,
MMD-AP0961HFE

Commercial name: Super Modular Multi System Air Conditioner

Complies with the provisions of the "Machinery" Directive (Directive 2006/42/EC) and the regulations transposing into national law

"Declaration of incorporation of partly completed machinery"

Must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of this Directive, where appropriate.

Complies with the provisions of the following harmonized standard:

EN 378-2: 2008+A1: 2009

NOTE

This declaration becomes invalid if technical or operational modifications are introduced without the manufacturer's consent.

Information according to EMC Directive 2004/108/EC	
(Name of the manufacturer)	TOSHIBA CARRIER CORPORATION
(Address, city, country)	336 Tadehara, Fuji-shi, Shizuoka-ken 416-8521 Japan
(Name of the Importer / Distributor in EU)	Toshiba Carrier UK Ltd.
(Address, city, country)	Porsham Close, Belliver Industrial Estate, PLYMOUTH, Devon, PL6 7DB. United Kingdom

EH99940601

TOSHIBA CARRIER CORPORATION
336 TADEHARA, FUJI-SHI, SHIZUOKA-KEN 416-8521 JAPAN