

TOSHIBA

Carrier

AIR CONDITIONER (SPLIT TYPE)

Owner's Manual



1128950203

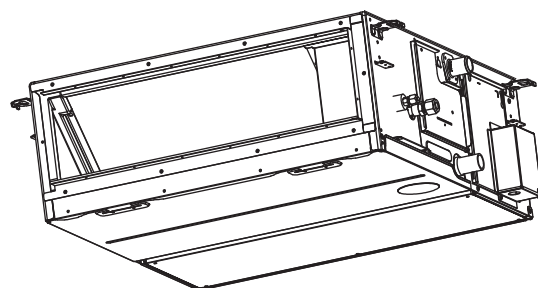
Indoor Unit

Model name:

Concealed Duct Type

For commercial use
Pour usage commercial
Para uso comercial

RAV-HB121BTP-UL
RAV-HB181BTP-UL
RAV-HB241BTP-UL
RAV-HB301BTP-UL
RAV-HB361BTP-UL
RAV-HB421BTP-UL
RAV-HB481BTP-UL



Owner's Manual 1 English

Manuel du Propriétaire 17 Français

Manual del Propietario 32 Español

Original instruction

ADOPTION OF NEW REFRIGERANT

This Air Conditioner uses R454B an environmentally friendly refrigerant.

According to UL 60335-1

This appliance is not intended for use by persons (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.

Children should be supervised to ensure that they do not play with the appliance.

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Thank you for purchasing this air conditioner.
Please read carefully through these instructions that contain important information and ensure that you understand them.
After reading these instructions, be sure to keep them in a safe place together with the Installation Manual supplied with your product.



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. He or she has been trained to install, maintain, relocate and remove the air conditioners, 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, 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, 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, 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. He or she has been trained to install, repair, maintain, relocate and remove the air conditioners, 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, 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, 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, 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.

These safety cautions describe important matters concerning safety to prevent injury to users or other people and damages to property. Please read through this manual after understanding the contents below (meanings of indications), and be sure to follow the description.





Indication	Meaning of Indication
 WARNING	Text set off in this manner indicates that failure to adhere to the directions in the warning could result in serious bodily harm (*1) or loss of life if the product is handled improperly.
 CAUTION	Text set off in this manner indicates that failure to adhere to the directions in the caution could result in slight injury (*2) or damage to property (*3) if the product is handled improperly.

*1: Serious bodily harm indicates loss of eyesight, injury, burns, electric shock, bone fracture, poisoning, and other injuries which leave aftereffect and require hospitalization or long-term treatment as an outpatient.






*2: Slight injury indicates injury, burns, electric shock, and other injuries which do not require hospitalization or longterm treatment as an outpatient.

*3: Damage to property indicates damage extending to buildings, household effects, domestic livestock, and pets.

■ Warning indications on the Air Conditioner Unit

	WARNING (Risk of fire)	This mark is for R32 refrigerant only. Refrigerant type is written on nameplate of outdoor unit. In case that refrigerant type is R32, this unit uses a flammable refrigerant. If refrigerant leaks and comes in contact with fire or heating part, it will create harmful gas and there is risk of fire.
		Read the OWNER'S MANUAL carefully before operation
		Service personnel are required to carefully read the OWNER'S MANUAL and INSTALLATION MANUAL before operation.
		Further information is available in the OWNER'S MANUAL, INSTALLATION MANUAL, and the like.

■ 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 aluminium 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, to avoid unnecessary pressure built up which could lead to explosion.

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 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 neighbour, install the air conditioner while considering the noise.)
- This appliance is intended to be used by expert or trained users in shops, in light industry, or for commercial use by lay persons.

Transportation and storage

- To transport 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 broken, contact your dealer.
- When the air conditioner must be transported by hand, carry it by two or more people.

Installation

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

Operation

- Before opening the electrical control box cover 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 electrical control box cover 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 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 19.7" (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.

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- When the air conditioner is operated with a combustion appliance in the same place, ventilate the room sufficiently. Poor ventilation causes oxygen shortage.
- When the air conditioner is used in a closed room, sufficiently ventilate 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.
- Do not 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 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 trouble.

- If the fan guard is damaged, do not approach the outdoor unit but set the circuit breaker to the OFF position, and contact a qualified service person to have the repairs done. Do not set the circuit breaker to the ON position until the repairs are completed.
- If there is a danger of the indoor unit's falling, do not approach the indoor unit but set the circuit breaker to the OFF position, and contact a qualified installer or a qualified service person to refit the unit. Do not set the circuit breaker to the ON position until the unit has been refitted.
- If there is a danger of the outdoor unit's toppling over, do not approach the outdoor unit but set the circuit breaker to the OFF position, and contact a qualified installer or a qualified service person to have the improvements or refitting done. Do not set the circuit breaker to the ON position until the improvements or refitting is completed.
- Do not modify the products. Do not also disassemble or modify the parts. It may cause a fire, electric shock or injury.

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 from the mains supply.

- This appliance must be connected to the mains by means of a switch with a contact separation of at least **0.1" (3 mm)**.

The 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. Improper drainage may cause flooding in the house and getting furniture wet.
- 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.
- 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.


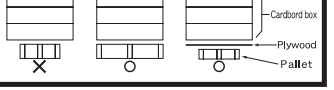
- Do not leave flammable sprays or other flammable materials near the air conditioner, and do not spray flammable aerosol directly to the air conditioner. They may catch fire.
- Stop running the air conditioner and turn off the breaker before cleaning. Otherwise, injury may result as the fan is rotating 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 or other parts, and result in a malfunction. In the worst case, it may result in water leakage, electric shock, smoke emission or 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.

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

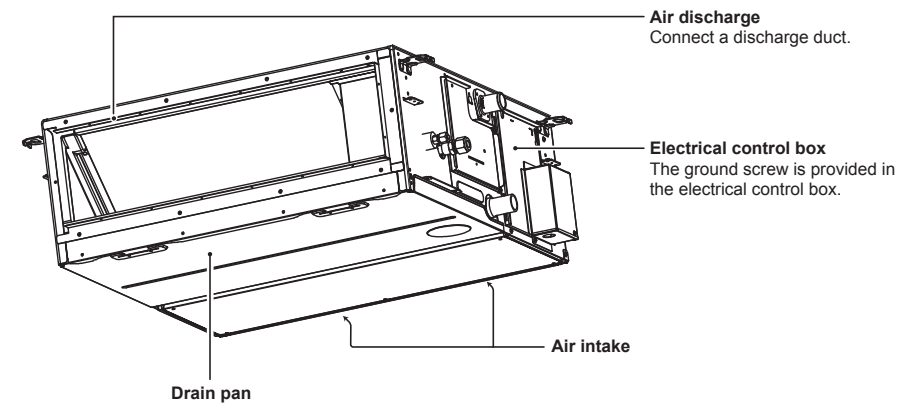
◆ Examples of indication on the carton

Symbol	Description	Symbol	Description
	Keep dry		Do not drop
	Fragile		Do not lay down
	Stacking height (6 cartons can be stacked in this case)		Do not walk on this carton
	This side up		Do not step
	Handle with care		

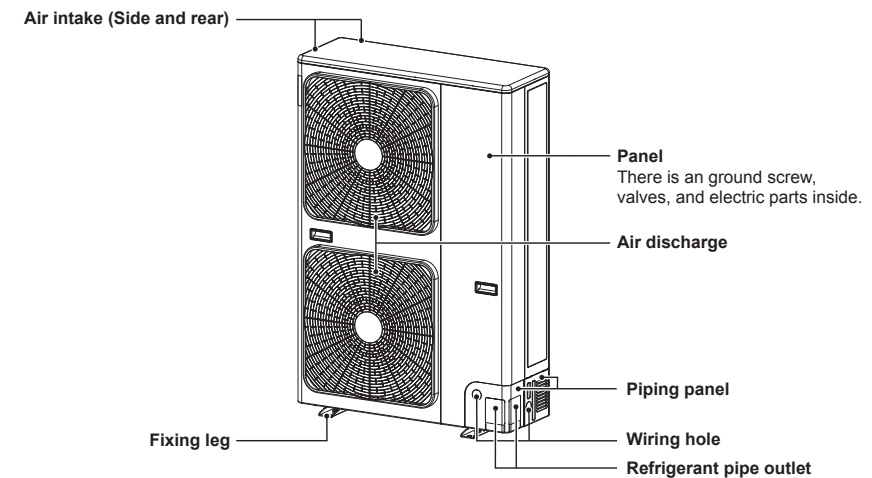
Other cautions	Description
 <div> Caution Injury possibility. Don't handle with packing band, or may get injured in case of broken band. </div>	CAUTION Injury possibility. Don't handle with packing band, or may get injured in case of broken band.
Stacking notice. In case that cardboard boxes protrude out of pallet when stacking, lay a 10mm thick plywood over the pallet. 	Stacking notice. In case that cardboard boxes protrude out of pallet when stacking. Lay a 0.4" (10 mm) thick plywood over the pallet.

2 Part names

■ Indoor unit




■ Outdoor unit (The design varies depending on the outdoor unit. The following illustration shows an example.)

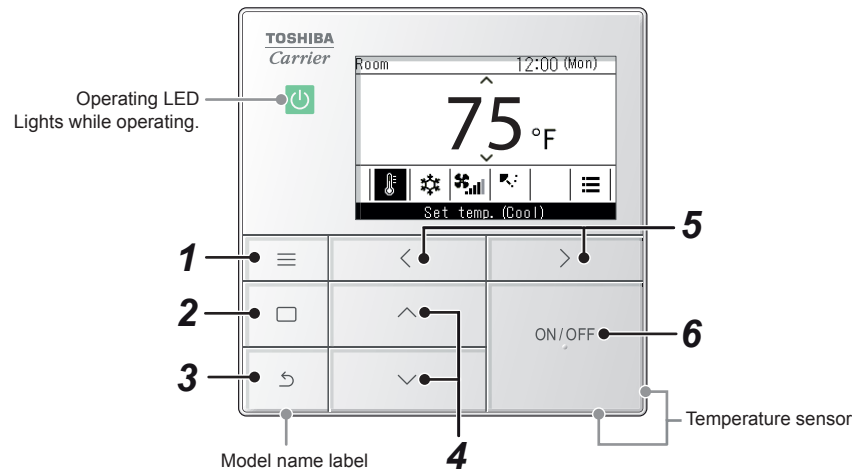


3 Wired remote controller

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

■ Before Use

Operate the remote control according to the following procedure when it is used for the first time or when the settings are changed. Pushing the [ ON/OFF] button starts running the air conditioning unit with the settings made on the remote control from the next time.



* The screens shown here are examples. The content that is displayed may differ, depending on the environment settings being used.

1 [MENU] button

Shows the "Menu".

2 [Set/Fix] button

Fixes and applies settings.
Ways to use it are shown on screen.

3 [Return] button

Deletes selections.
Ways to use it are shown on screen.

4 [] and [] buttons

Changes settings and selects items.

5 [] and [] buttons

Selects setting items.
Other ways to use it are shown on screen.

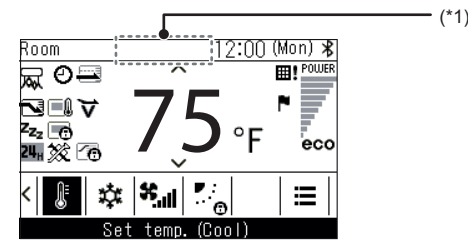
6 [ON/OFF] button

Starts and stops connected devices.

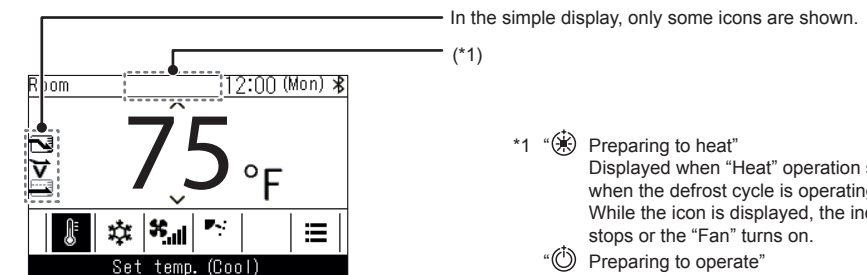
Switching between the detailed display and simple display (air conditioner main screen only)




You can change the main screen to the simple display, depending on the "Display mode" setting. For details on changing "Display mode", refer to "Display setting" in "Initial setting" in the Installation Manual.
The detailed display is set as the factory default setting.

Detailed display (factory default setting)

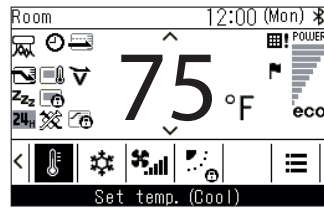


Simple display



- *1  "Preparing to heat"
Displayed when "Heat" operation starts or when the defrost cycle is operating. While the icon is displayed, the indoor fan stops or the "Fan" turns on.
-  "Preparing to operate"
This may be displayed on some models.
-  "Preparing to operate ventilation"
Displayed while the air to air heat exchanger is on standby. While this is being displayed, the air to air heat exchanger remains stopped.

Icon list



▼ Air conditioner

	Displayed when "Energy saving operation" is "ON".		Displayed when "Timer" is "ON".
	Displayed when remote controller sensor is set.		Displayed when "Louver lock" is set.
	Displayed when "Night operation" is "ON".		Displayed when it is time for filter maintenance.
	Displayed when operations are locked by central control.		Displayed when "Soft Cooling" operation is "ON".
	Displayed when "Saving operation" is "ON".		Displayed for about 3 seconds when the operation mode is changed in the "Mode" screen when the operation mode is restricted.
	Displayed when the Bluetooth® function is "ON". Refer to the Owner's Manual of the Bluetooth® function regarding Bluetooth® functions.		Displayed when "Air purifier" function is "ON".
	Displayed when a check code occurs		Displayed when a notice code occurs. For details, contact your dealer.
	It reaches the set temperature, and displayed while the room temperature is maintained.		It is displayed when a commercially available ventilation unit connected to the air conditioner is in operation.

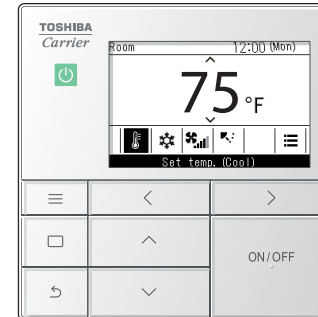
*1: Refer to the Installation Manual of the Wired remote controller.

4 Operation

■ Running operation

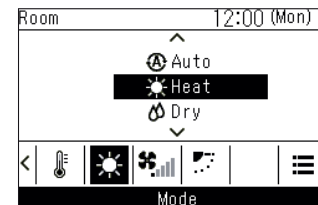
* Some operation modes are not available depending on the type of indoor unit.

■ Operations

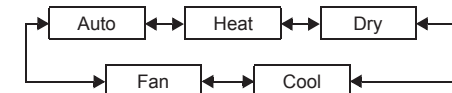


- 1 Press [**ON/OFF**] to start operations
→ The operation LED lights.
- 2 Press [**◀**] and [**▶**] to select the item you want to change
→ You can change the following items.
Setting temperatures
Operation mode
Fan speed
Wind direction
- 3 To stop operations, press [**ON/OFF**] again

■ Changing the operation mode



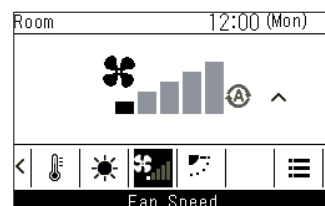
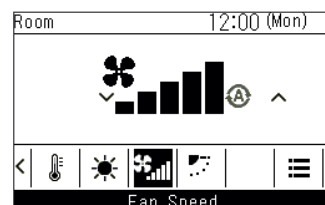
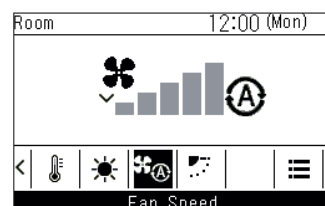
- 1 Press [**◀**] and [**▶**] to switch to the "Mode" screen
- 2 Press [**◀**] and [**▶**] to select an operation mode



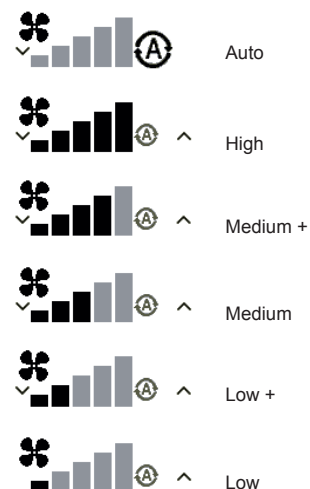
NOTE

Operation modes that cannot be set are not shown, according to the model of indoor unit.

■ Changing the fan speed



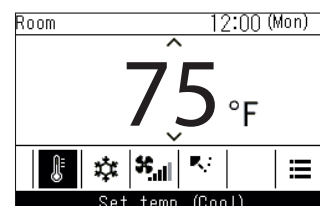
- 1 Press [<] and [>] to switch to the "Fan Speed" screen
- 2 Press [^] and [v] to select fan speed



NOTE

- When the operation mode is "Fan", you cannot select "Auto".
- The fan speed that can be set varies depending on the indoor unit connected.
- "Auto" is displayed when combined with an indoor unit that cannot do "Fan Speed".

■ Changing the temperature



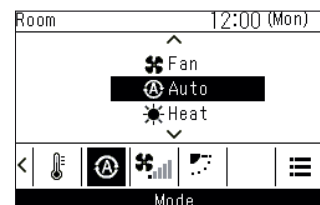
- 1 Press [<] and [>] to switch to the "Set temp." screen
- 2 Press [^] and [v] to change the temperature setting
→ Press [^] to increase and press [v] to decrease the set temperature.

NOTE

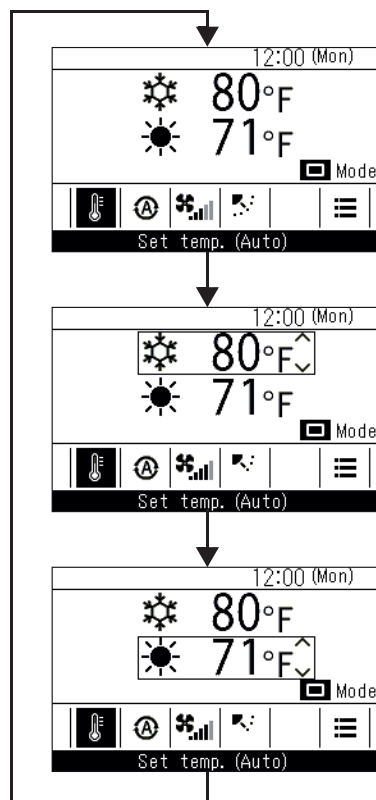
- The temperature setting cannot be changed when "Fan" is set.
- If the operation mode is set to "Auto" and dual set point is set, refer to <Individual temperature settings for "Cool" and "Heat" in auto operation modes (dual set point)>.

▼ When dual automatic mode

With dual set point settings, you can set individual temperature settings for "Cool" and "Heat" operations to adjust the indoor temperature. To use this, ask your dealer to set it.





- 1 Press [<] and [>] to switch to the "Mode" screen
- 2 Press [^] and [v] to select "Auto"
- 3 Press [<] and [>] to switch to the "Set temp." screen



4 Press [ Set/Fix]



“Cool”

5 Press [ Set/Fix]

6 Press [] and [] to change the temperature setting for “Cool”

“Heat”

7 Press [ Set/Fix]

8 Press [] and [] to change the temperature setting for “Heat”

NOTE

When connecting to an air conditioning control system which does not support dual set point



- The temperature set point, a value half the heating temperature and Cooling temperature set point will be displayed.
- When temperature setting has been changed by the unsupported controller, the cooling temperature set point and heating temperature set point displayed on the dual set point screen will be set automatically.
- For details, contact the dealer where you purchased the air conditioner.

■ 46°F (8°C) operation (For object pre-heating)


The air conditioner can control the heating temperature to about 46°F (8°C) in the heating mode.

The 46°F (8°C) heating operation requires settings with the wired remote controller. Ask the installer or dealer for the settings according to the installation manual of the indoor unit.

Start

1. Set the displayed temperature to 64°F in the heating mode by pushing TEMP. [] button.
2. Set the displayed temperature to 46°F by pushing TEMP. [] button for at least 4 seconds


Stop

1. Set the displayed temperature to 64°F by pushing TEMP. [] button.
 - The air conditioner returns to the normal HEAT mode. Select a desired temperature and operation mode.

NOTE

- The discharged air temperature is lower than that in the normal heating operation.
- The room temperature may not be heated evenly depending on the remote controller installation location.
- The room temperature may not reach 46°F depending on the room size or the installation conditions.
- Setting for fan speed is available during the 46°F heating operation.

The 46°F heating operation is cancelled in the following cases.

- When operation is stopped with [] button.
- When temperature setting or operation mode is changed or operation is started / stopped by the wireless remote controller or the central control remote controller.
- When this operation mode is used, observe proper operating hours and periodic maintenance by service staff is recommended.

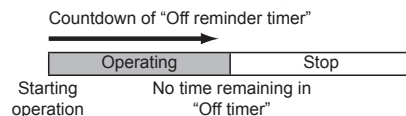
5 Off reminder timer

■ Off reminder timer



NOTE

- The air conditioner starts operating, and after the set time has elapsed, the air conditioner stops operating.



- "Off reminder timer" does not operate in the following conditions.
 - When "Off reminder timer" is disabled, during abnormalities, in test mode, during function settings, while a timer is set, and during central control (if "ON/OFF" is prohibited)
 - When 2 remote controllers are connected, settings cannot be done on the "Follower remote controller".
 - The setting range of "Off reminder timer" is a minimum of 30 minutes and a maximum of 240 minutes.
 - Press [Return] to not fix the changes, so conditions are as before changes, and return to the "Timer" screen.
 - When "Off reminder timer" is "ON", then "O" is displayed in the detailed display.

- In the "Off reminder timer" screen, press [Up] and [Down] to select "Off reminder timer"

- Press [Left]
 - Pressing [Right] cancels the settings.

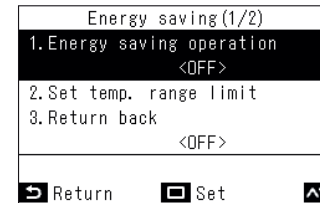
- Press [Up] and [Down] to select "Timer"

- Press [Left] and [Right] to change the time
 - Times can be set in 10 minute intervals.

- Press [Set/Fix]
 - Return to the "Timer" screen.

6 Energy saving

Set for the energy saving operation: Energy saving operation, Set temp. range limit, Return back and Saving operation.

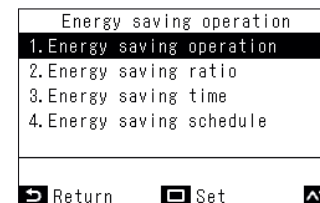


- Select "Energy saving", and press [Set/Fix]
- Press [Up] and [Down] to select an item
- Press [Set/Fix]

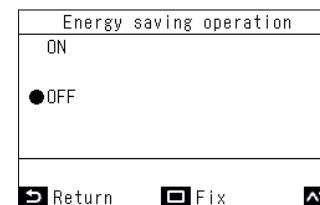
Item	Description
1. Energy saving operation	Operates the air conditioners with suppressed performance.
2. Set temp. range limit	Limits the range of temperatures that can be set by the remote controller.
3. Return back	Sets to automatically return to a set temperature after the temperature setting is changed at the remote controller.
4. Saving operation	Operates to suppress excessive heating and excessive cooling. * For models that "Saving operation" is not available, the message "No function" is displayed.

■ Energy saving operation

Set for the power saving operation of the air conditioner.



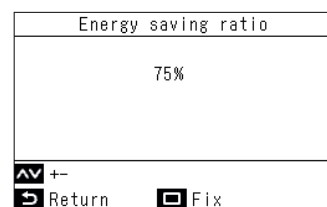
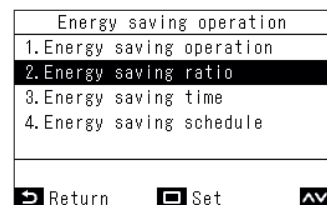
- In the "Energy saving" screen, press [Up] and [Down] to select "Energy saving operation", and then press [Set/Fix]
- Press [Up] and [Down] to select "Energy saving operation", and then press [Set/Fix]
- Press [Up] and [Down] to select "ON" or "OFF"
 - To start "Energy saving operation", set "Energy saving ratio", "Energy saving time", and "Energy saving schedule".
- Press [Set/Fix]



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Energy saving ratio

Carry out the setting operation while the indoor unit is stopped. (Turn off the air conditioning unit before starting the setting operation.)



NOTE

- With "Energy saving operation", operation is done by suppressing the performance of the air conditioners, so cooling (warming) may be insufficient.
- When 2 remote controllers are connected, settings cannot be done on the "Follower remote controller".
- This setting may not be possible by using the remote controller, depending on the settings of the outdoor unit or central control device.
- Energy saving schedule operation is not done if the clock is flashing (not set).
- An optional saving ratio of 100% is normal operation.
- When "Energy saving operation" is being done, "⏏" is displayed on the screen.

- 1 In the "Energy saving operation" screen, press [▲] and [▼] to select "Energy saving ratio", and then press [Set/Fix]**
- 2 Press [▲] and [▼] to change the values**
→ An optional saving ratio can be set within a range of 50 to 100% in 1% increments. The lower the value, the higher the energy-saving effect on operations.
- 3 Press [Set/Fix]**
→ When "⏏" appears, return to the "Energy saving operation" screen.

7 Maintenance

Turn off the power before maintenance.

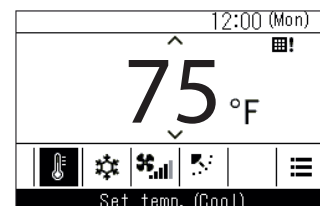
CAUTION

Do not operate the unit with wet hands.
Doing so may result in electric shocks.

Daily maintenance

Wipe the remote control with a dry, soft cloth. Using water to clean the remote control may result in a malfunction.

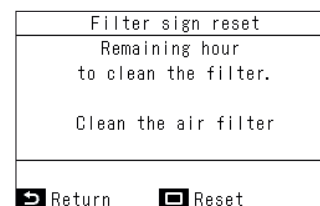
Cleaning the air filter



- When "⏏" is displayed, be sure to clean the filters and then do a reset.
For how to clean filters, refer to the Owner's Manual of the indoor unit.

- If the air conditioners are operated while "⏏" is displayed, then "Filter check." is displayed. Press an operation button while it is displayed or leave it for at least 5 seconds and the display will disappear.

When the filter check mark is displayed (filter check reset)



- 1 In "Menu", select "Filter sign reset", and press [Set/Fix]**
- 2 Press [Set/Fix]**

NOTE

For environmental conservation, it is strongly recommended that the indoor and outdoor units of the air conditioner in use be cleaned and maintained regularly to ensure efficient operation of the air conditioner. When the air conditioner is operated for a long time, periodic maintenance (once a year) is recommended. Furthermore, regularly check the outdoor unit for rust and scratches, and remove them or apply rustproof treatment, if necessary.

As a general rule, when an indoor unit is operated for 8 hours or more daily, clean the indoor unit and outdoor unit at least once every 3 months. Ask a professional for this cleaning / maintenance work.

Such maintenance can extend the life of the product though it involves the owner's expense.

Failure to clean the indoor and outdoor units regularly will result in poor performance, freezing, water leakage, and even compressor failure.

▼ Maintenance List

Part	Unit	Check (visual / auditory)	Maintenance
Heat exchanger	Indoor / outdoor	Dust / dirt clogging, scratches	Wash the heat exchanger when it is clogged.
Fan motor	Indoor / outdoor	Sound	Take appropriate measures when abnormal sound is generated.
Filter	Indoor	Dust / dirt, breakage	<ul style="list-style-type: none"> Wash the filter with water when it is contaminated. Replace it when it is damaged.
Fan	Indoor	<ul style="list-style-type: none"> Vibration, balance Dust / dirt, appearance 	<ul style="list-style-type: none"> Replace the fan when vibration or balance is terrible. Brush or wash the fan when it is contaminated.
Air intake / discharge grilles	Indoor / outdoor	Dust / dirt, scratches	Fix or replace them when they are deformed or damaged.
Drain pan	Indoor	Dust / dirt clogging, drain contamination	Clean the drain pan and check the downward slope for smooth drainage.
Exterior	outdoor	<ul style="list-style-type: none"> Rust, peeling of insulator Peeling / lift of coat 	Apply repair coating.

8 Troubleshooting

Check the points described below before requesting repair.

Symptom		Cause
It is not a failure.	Outdoor unit	<ul style="list-style-type: none"> White, misty, cold air or water comes out Sometimes the noise of air leaking is heard. A noise is heard when the power is turned on.
	Indoor unit	<ul style="list-style-type: none"> Sometimes a swishing is heard. A clacking sound is heard. Discharged air smells unusual.
		<ul style="list-style-type: none"> The unit does not run.
Check again.	The room does not cool down.	<ul style="list-style-type: none"> Has a blackout occurred? Has the circuit breaker blown? Has the protective device been activated? (The operation indicator and \mathcal{L} on the remote controller are blinking.) Is the air intake or discharge of the outdoor unit clogged? Is a door or window open? Is the air filter clogged with dust? Is the air volume set to "LOW"? Or is the operation mode set to "FAN"? Is the setup temperature appropriate?

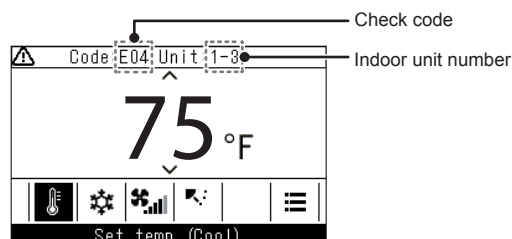
If there is something unusual even after checking the above, stop running the unit, turn off the circuit breaker, and inform the dealer where you purchased the product of the product number and symptom. Do not attempt to repair the unit by yourself as doing so is dangerous. If the check indicator (e.g. EG , FG , HG) is displayed on the remote controller LCD, inform the dealer of its content as well.

If any of the following occur, stop running the unit immediately, turn off the circuit breaker, and contact the dealer where you purchased the product.

- The switch does not work properly.
- The circuit breaker often blows out.
- You unintentionally put a foreign object or water inside.
- The unit cannot be run even after the cause of the protective device activation is removed.
- Other unusual conditions are found.

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■ Confirmation and check

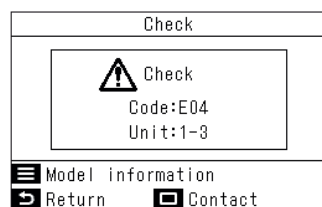


When an error occurs in the air conditioner, the check code and the indoor unit number flash on the display of the remote controller.

* The check code is only displayed during the operation.

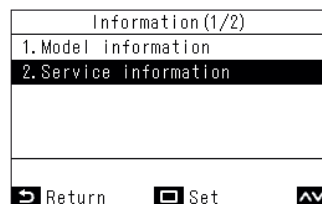
When the check code and indoor unit number are displayed, pressing [Return] opens the "Check" screen.

In the "Check" screen, press [Set/Fix] to show the contacts. Press [Menu] to display "Model information".



■ Contact information for repairs

You can look for contact information for repairs.



1 In the "Information" screen, press [] and [] to select "Service information", and then press [Set/Fix]

9 Operations and performance

▼ Check before running

- Check whether the ground wire is cut or disconnected.
- Check whether the air filter is installed.
- Turn on the circuit breaker 12 hours or more before starting operation.

▼ 3 minutes protection function

3-minutes protection function prevents the air conditioner from starting for initial 3 minutes after the main power switch / circuit breaker is turned on for restarting the air conditioner.

▼ Power failure

Power failure during operation will stop the unit completely.

- To restart the operation, push the ON / OFF button on the remote controller.
- Lightning or a wireless car telephone operating nearby may cause the unit to malfunction. Turn off the main power switch or circuit breaker and then turn them on again. Push the ON / OFF button on the remote controller to restart.

▼ Defrosting operation

If the outdoor unit is frosted during the heating operation, defrosting starts automatically (for approximately 2 to 10 minutes) to maintain the heating capacity.

- The fans in both indoor and outdoor units will stop during the defrosting operation.
- During the defrosting operation, the defrosted water will be drained from the bottom plate of the outdoor unit.

▼ Heating capacity

In the heating operation, the heat is absorbed from the outside and brought into the room. This way of heating is called heat pump system. When the outside temperature is too low, it is recommended to use another heating apparatus in combination with the air conditioner.

▼ Air conditioner operating conditions

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

Cooling operation	Outdoor temperature	: 5°F to 115°F (Dry bulb temp.)
	Room temperature	: 70°F to 90°F (Dry bulb temp.), 59°F to 75°F (Wet bulb temp.)
	[CAUTION] Room relative humidity – less than 80%. If the air conditioner operates in excess of this figure, the surface of the air conditioner may cause dewing.	
Heating operation	Outdoor temperature	: -13°F to 59°F (Wet bulb temp.)
	Room temperature	: 59°F to 86°F (Dry bulb temp.)

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

▼ Protective device

- Stops operation when the air-conditioner is overloaded.
- If the protective device is activated, the unit stops running, and the operation indicator and check indicator on the remote controller blink.

▼ If the protective device is activated

- Turn off the circuit breaker and perform a checkup. Continued running may cause a malfunction.
- Check whether the air filter is installed. If not, the heat exchanger may be clogged with dust and water leakage may occur.

▼ During cooling

- The air intake or discharge of the outdoor unit is clogged.
- Strong wind continuously blows against the outlet of the outdoor unit.

▼ During heating

- The air filter is clogged with a large amount of dust.
- The air intake or discharge of the indoor unit is clogged.

▼ Do not turn off the circuit breaker

- During the air-conditioning season, leave the circuit breaker turned on, and use the ON / OFF key on the remote controller.

▼ Attention to snowfall and freeze on the outdoor unit

- In snowy areas, the air intake and air discharge of the outdoor unit are often covered with snow or frozen up. If snow or freeze on the outdoor unit is left as it is, it may cause machine failure or poor warming.
- In cold areas, pay attention to the drain hose so that it perfectly drains water without water remaining inside for freeze prevention. If water freezes in the drain hose or inside the outdoor unit, it may cause machine failure or poor warming.

10 Installation

Do not install the air conditioner in the following places

- Do not install the air conditioner in any place within 39.4" (1 m) from a TV, stereo, or radio set. If the unit is installed in such place, noise transmitted from the air conditioner affects the operation of these appliances.
- Do not install the air conditioner near a high frequency appliance (such as sewing machine or massager for business use), otherwise the air conditioner may malfunction.
- 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.
- Do not install the air conditioner in a humid or oily place, or in a place where steam, soot, or corrosive gas is generated.
- Do not install the air conditioner in a salty place such as seaside area.
- Do not install the air conditioner in a place where a great deal of machine oil is used.
- Do not install the air conditioner in a place where it is usually exposed to strong wind such as in seaside area.
- Do not install the air conditioner in a place where sulfurous gas generated such as in a spa.
- Do not install the air conditioner in a vessel or mobile crane.
- Do not install the air conditioner in an acidic or alkaline atmosphere (in a hot-spring area or near a chemicals factory, or in a place subject to combustion emissions). Corrosion may be generated on the aluminum fin and copper pipe of the heat exchanger.
- Do not install the air conditioner near an obstacle (such as air vent, lighting equipment) that disturbs discharge air. (Turbulent airflow may reduce the performance or disable devices.)
- Do not use the air conditioner for special purposes such as preserving food, precision instruments, or art objects, or where breeding animals or growing plants are kept. (This may degrade the quality of preserved materials.)
- Do not install the air conditioner over an object that must not get wet. (Condensation may drop from the indoor unit at a humidity of 80% or more or when the drain port is clogged.)
- Do not install the air conditioner in a place where an organic solvent is used.
- Do not install the air conditioner near a door or window subject to humid outside air. Condensation may form on the air conditioner.
- Do not install the air conditioner in a place where special spray is used frequently.

Be careful with noise or vibrations

- Do not install the air conditioner in a place where noise by outdoor unit or hot air from its air discharge annoys your neighbours.
- Install the air conditioner on a solid and stable foundation so that it prevents transmission of resonating, operation noise and vibration.
- If one indoor unit is operating, some sound may be audible from other indoor units that are not operating.

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