

TOSHIBA

AIR CONDITIONER (SPLIT TYPE) Owner's Manual

R32 or R410A

For commercial use

Indoor Unit

Model name:

Floor Standing Type

RAV-RM561FT-EN

RAV-RM801FT-EN

RAV-RM1101FT-EN

RAV-RM1401FT-EN

RAV-RM1601FT-EN

RAV-RM561FT-ES

RAV-RM801FT-ES

RAV-RM1101FT-ES

RAV-RM1401FT-ES

RAV-RM1601FT-ES



For details of setting remote controller built in this unit, refer to the separate Owner's Manual of remote controller. This Owner's Manual describes only major items.

Original instruction

ADOPTION OF R32 or R410A REFRIGERANT

This Air Conditioner has adopted a refrigerant HFC (R32 or R410A) which does not destroy 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.
Children should be supervised to ensure that they do not play with the appliance.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

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Thank you for purchasing this Toshiba air conditioner.
Please read carefully through these instructions including important information which complies with the "Machinery Directive" (Directive 2006/42/EC), and ensure that you understand them.
After reading these instructions, be sure to keep them in a safe place together with the Owner's Manual and 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 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





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 (*3) to property 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 long-term treatment as an outpatient.

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

	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 indication	Description		
 <table border="1"> <tr> <td>WARNING</td> </tr> <tr> <td>ELECTRICAL SHOCK HAZARD Disconnect all remote electric power supplies before servicing.</td> </tr> </table>	WARNING	ELECTRICAL SHOCK HAZARD Disconnect all remote electric power supplies before servicing.	WARNING ELECTRICAL SHOCK HAZARD Disconnect all remote electric power supplies before servicing.
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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.
- Do not install the air conditioner in a place 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.)
- 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 four or more people.

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 trouble has occurred in the air conditioner, set the circuit breaker to the OFF position, and contact a service person.
- If the unit is installed in a small room, take appropriate measures to prevent the refrigerant from exceeding the limit concentration even if it leaks. Consult the dealer from whom you purchased the air conditioner when you implement the measures. Accumulation of highly concentrated refrigerant may cause an oxygen deficiency accident.
- Do not install the air conditioner in a location that may be subject to a risk of expire to a combustible gas. If a combustible gas leaks and becomes concentrated around the unit, a fire may occur.
- 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 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 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.

- 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 top off of the outdoor unit and result in injury.
- Do not place any combustion appliance in a place where it is directly exposed to the wind of air conditioner, otherwise it may cause imperfect combustion.
- When the air conditioner is operated with a combustion appliance in the same place, ventilate the room 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(*1) when the repair includes additional charging of the refrigerant.
- Do not turn off the circuit breaker when an outdoor unit with R32 refrigerant is combined using indoor units except when there is a smell of burning or an air conditioner is checked.
Turning off the circuit breaker cause refrigerant leak detection sensor not to operate, if refrigerant leaks and come in contact with fire, a fire occurs.
- If check codes “J29” or “J31” appear on the remote controller LCD (Liquid Crystal Display), replace a refrigerant leak detection sensor. Contact the dealer where you purchased the air conditioner to replace the refrigerant leak detection sensor. Continuing to use the air conditioner in the status above may cause a fire in case refrigerant leak occurs.
- When there is the risk of R32 refrigerant leak, do not use a combustion appliance near the air conditioner. Check code “J30” appears on the remote controller LCD while air conditioner operates. When a fan is automatically operating while air conditioner stops and it does not shut off even if ON/OFF button is pushed, R32 refrigerant may be leaking. Ventilate the room and do not turn off the circuit breaker, and contact the dealer where you purchased the product.

Repairs

- When you have noticed that some kind of trouble (such as when a check 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 abnormal status may cause mechanical problems to escalate or result in electric shocks, etc.
- If the fan grille is damaged, do not approach the outdoor unit but set the circuit breaker to the OFF position, and contact a qualified service person to have the repairs done. Do not set the circuit breaker to the ON position until the repairs are completed.
- If 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 there is a danger of the outdoor unit’s toppling over, do not approach the outdoor unit but set the circuit breaker to the OFF position, and contact a qualified installer or a qualified service person to have the improvements or refitting done. Do not set the circuit breaker to the ON position until the improvements or refitting is completed.
- Do not customize the unit. Doing so may result in fire, electric shock or other trouble.

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.

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

⚠ CAUTION

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.
- Do not install the air conditioner in place where steam is generated, or in place near the humidifier etc. Dew may form in the parts built in the unit, causing trouble of the unit.











Operation


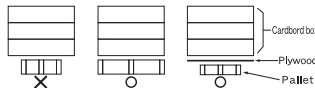
- Do not use this air conditioner for special purpose such as preserving food, precision instruments, art objects, breeding animals, car, vessel.
- Do not touch any switches with wet finger, otherwise you may get an electric shock.
- If the air conditioner will not be used for a considerably long time, turn off the main switch or the circuit breaker, for safety. (Only R410A refrigerant)
- 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.
- Do not install the air conditioner in a place where smoke, chemical agent, or organic solvent is present. Do not use gas equipment using combustion gas (LPG etc.) such as propane, butane, or methane, an insecticide, or sprays or paints containing siloxane, near the indoor unit. The refrigerant leak detection sensor works mistakenly, causing air conditioner not to operate.

- Be careful of indoor unit fan operation when the circuit breaker is turned on. If the refrigerant leak detection sensor works, a fan automatically operates even while an air conditioner stops, be careful not to be injured.
 - When you change layout or partition in the room in which air conditioner has been installed or when you relocate an air conditioner, be attention to the floor area. If reducing the floor area for room modification, preform the modification so that the floor area must not be smaller than minimum floor area described in Appendix of the Installation Manual for indoor 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.
 - Replace a refrigerant leak detection sensor if five years have passed after an air conditioner had been installed. Contact the dealer where you purchased the air conditioner to replace the refrigerant leak detection sensor. It may exceed its life of the product.
-

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

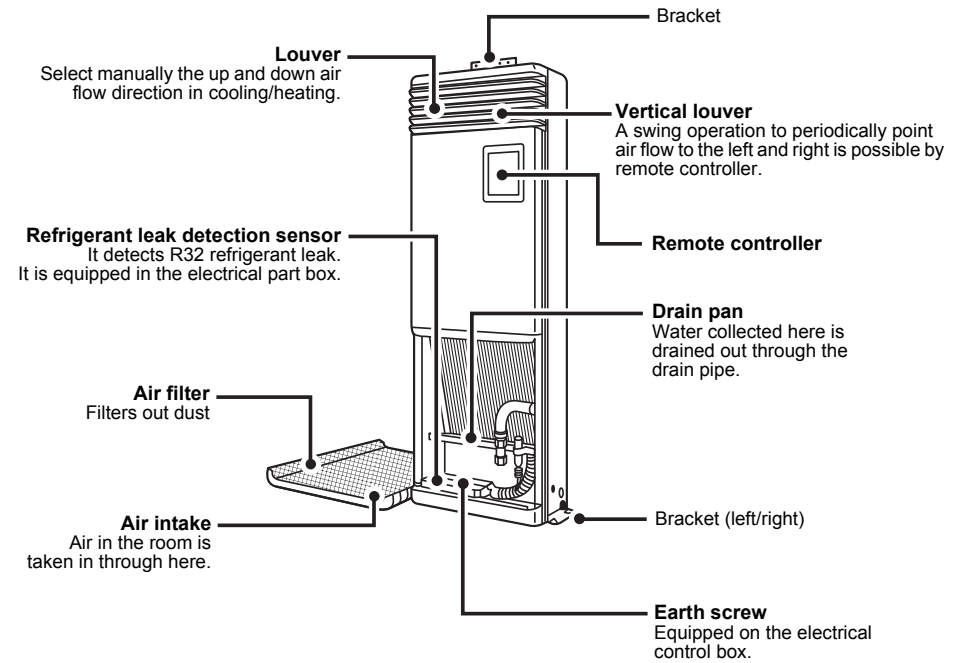
Examples of indication on the carton

Symbol	Description	Symbol	Description
	Keep dry	 DO NOT DROP	Do not drop
 FRAGILE	Fragile	 DO NOT LAY DOWN	Do not lay down
 2 cartons	Stacking height (2 cartons can be stacked in this case)		Do not step
	This side up		Do not drop (corner)
	Handle with care		Do not roll

Other cautions	Description
 <div style="border: 1px solid black; padding: 5px; margin-left: 10px;"> <p>Caution</p> <p>Injury possibility. Don't handle with packing band, or may get injured in case of broken band.</p> </div>	<p>CAUTION</p> <p>Injury possibility. Don't handle with packing band, or may get injured in case of broken band.</p>
<p>Stacking notice.</p> <p>In case that cardboard boxes protrude out of pallet when stacking, lay a 10mm thick plywood over the pallet.</p> 	<p>Stacking notice.</p> <p>In case that cardboard boxes protrude out of pallet when stacking. Lay a 10 mm thick plywood over the pallet.</p>

2 Part Names

■ Indoor unit

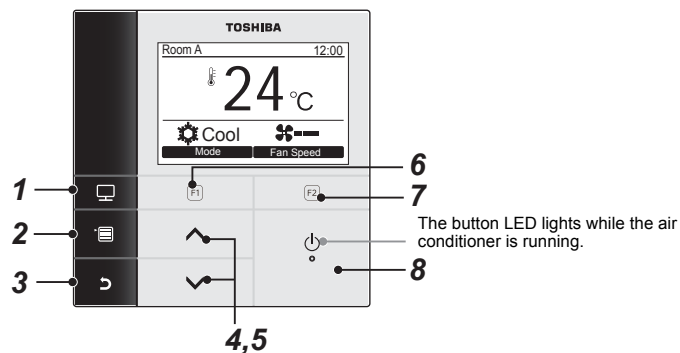


3 Remote controller

■ Operation section

Push each button to select a desired operation.

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



1 [MONITOR] button
Displays the monitoring screen.

2 [MENU] button
Displays the menu screen.

3 [CANCEL] button
Functions as indicated on the screen, such as returning to the previous menu screen.

4 [▲ ▲] button
During normal operation: adjusts the temperature.
On the menu screen: selects a menu item.

5 [▼ ▼] button
During normal operation: adjusts the temperature.
On the menu screen: selects a menu item.

6 [F1] button
Varies its function according to the setting screen.

7 [F2] button
Varies its function according to the setting screen.

8 [ON/OFF] button

■ Display section

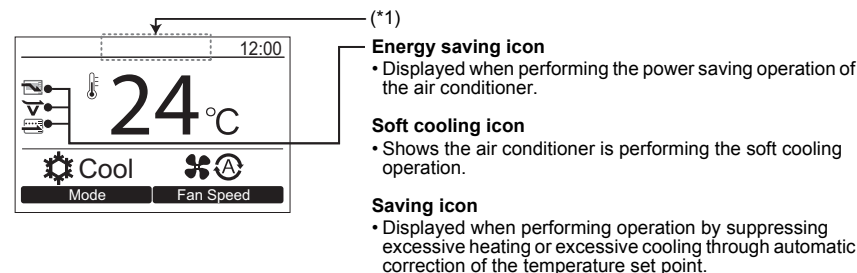
In the display illustration below all the icons are shown to explain each operation. When the unit is in operation, only relevant icons will be displayed.

Switching between the normal display and detailed display

Push and hold the [CANCEL] button and [MONITOR] button at the same time for more than 4 seconds to switch the display mode.

The normal display mode is selected as a factory default setting.

Normal display mode (factory default)



Energy saving icon

- Displayed when performing the power saving operation of the air conditioner.

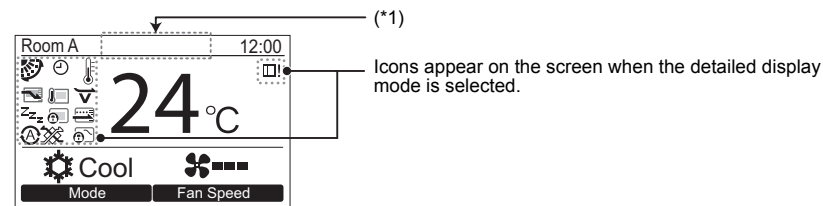
Soft cooling icon

- Shows the air conditioner is performing the soft cooling operation.

Saving icon

- Displayed when performing operation by suppressing excessive heating or excessive cooling through automatic correction of the temperature set point.











Detailed display mode



(*1) Icons appear on the screen when the detailed display mode is selected.

- *1 • The "Preparing to heat" icon appears when the heating operation starts or when defrosting operation. The indoor fan stops or the operation becomes the blowing operation when it is displayed.
- It may be displayed depending on the model when "Preparing to operate" is displayed.






▼ Icon list

	Shows the Energy saving operation is activated.		Shows a timer function is activated.
	Shows the remote sensor is activated. (*1)		Shows the setting of the louver.
	Shows the Night operation is activated.		Shows the filter needs to be cleaned.
	Shows the central control device prohibits the use of the remote controller.		Shows soft cooling is activated.
	Shows the saving operation is activated.		Shows operation switching control is in progress.


*1: Remote controller sensor is not available for this model since remote controller is built in the unit. To use this function, remote controller sensor (separately sold) is required. For details, consult the dealer where you purchased the product.

▼ Ventilation icon list

- Ventilation icons appear on the display only when a ventilation unit is connected.
- Refer to the Owner's Manual supplied with the Air to Air Heat Exchanger for details about the ventilation icons.


	Automatic mode		24-hour ventilation mode
	Bypass mode		Nighttime heat purge mode
	Total heat exchange mode		

4 Correct Usage

Operate the remote controller 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 conditioner with the settings made on the remote controller from the next time.

Preparation

Turn on the circuit breaker.




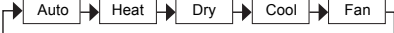

- “ Setting” appears on the display of the remote controller when the power is turned on.
- * When the power is turned on, it takes about 5 minutes before the remote controller becomes operable. This is not a malfunction.

NOTE

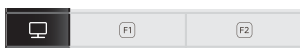
- Do not turn off the circuit breaker during the season using the air conditioner.
- Turn on the circuit breaker 12 hours or more before starting running the air conditioner when the unit has not been used for an extended period of time.
- When an outdoor unit using R32 refrigerant is combined, in order to detect refrigerant leak, do not turn off the circuit breaker even if air conditioner will not be operated for long time.

■ Running operation



- 1 Push the [ ON/OFF] button to start running.
- 2 Push the “  Mode” [ F1] button to select the operation mode.
→ The operation mode changes as follows each time the button is pushed.

- 3 Push the [ ON/OFF] button to stop running.

■ Changing the fan speed



- 1 Push the “**Fan speed** Fan speed” [F2] button to select the fan speed.

→The fan speed changes as follows each time the button is pushed.



→“Auto” is not available when “Fan” is selected as the operation mode.

■ Changing the temperature



- 1 Push the [▲ ▲] / [▼ ▼] button to adjust the temperature.

→Push the [▲ ▲] button to raise the temperature setting, push the [▼ ▼] button to lower it.

- For setting temperature range for each operation mode, refer to the Set temp. range limit on the separate Owner's Manual for remote controller.
- The temperature cannot be adjusted when “Fan” is selected as the operation mode.

NOTE

Auto Changeover

- When in Auto Mode, the unit selects the operating mode (cooling, heating or fan only) based on the user set point temperature.
- If the Auto mode is uncomfortable, you can select the desired conditions manually.

Cooling

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

Heating

- If there is a demand for heating, unit will start approximately 3 to 5 minutes after the mode is selected.
- After the heating operation has stopped, fan may continue to run for approx. 30 seconds.
- When the room temperature reaches the set temperature, the outdoor unit stops and the indoor unit fan runs at extremely low speed.
- During defrost operation, the fan stops so that cool air is not discharged. (“Preparing to heat” icon is displayed.)

When restarting the operation after stop

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

5 Off reminder timer

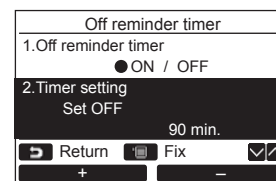
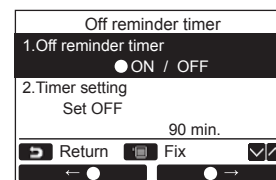
Before setting



- 1 Push the [MENU] button.
- 2 Push the [▲ ▲] / [▼ ▼] button to select “4. Off reminder timer” on the menu screen, then push the “Set” [F2] button.

Off reminder timer

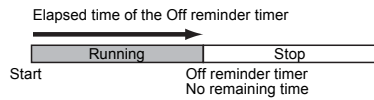
Set the length of time until the air conditioner stops automatically.



- 1 Push the [▲ ▲] / [▼ ▼] button to select “1. Off reminder timer”.
- 2 Push the “← ●” [F1] button. →Push the “● →” [F2] button to turn off the Off reminder timer.
- 3 Push the [▲ ▲] / [▼ ▼] button to select “2. Timer setting”.
- 4 Push the “+” [F1] / “-” [F2] button to set the time. →The time can be set at 10 minutes intervals.
- 5 Push the [MENU] button. →The screen returns to the menu screen.

NOTE

- The air conditioner stops running after the specified time has elapsed.



- "⌚" appears on the detailed display when the Off reminder timer is used.
- The Off reminder timer does not work in the following cases:
 - When the Off reminder timer is deactivated
 - When a trouble has occurred
 - While the test operation is in progress
 - While setting the functions
 - When the central control is used (when the run and stop operation is prohibited)
- The Off reminder timer cannot be set on the sub remote controller when the two remote controller system is used.
- The time of Off reminder timer can be set within the range from 30 minutes to 240 minutes.
- Push the [] CANCEL button to stop the setting procedure. No setting has been made and the screen returns to the menu screen.

Schedule timer

- Up to 8 different running patterns per day can be programmed with the schedule timer. Up to 3 patterns of settings that differ per day can be set. Days of the week when the schedule timer is not used can also be set in "Holiday setting".
- For Schedule timer, refer to separate Owner's Manual for remote controller.

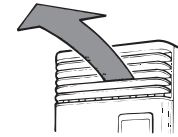
6 Adjustment of Wind Direction

For best cooling and heating performance, adjust the louvers (adjustment plates of up / down wind direction) appropriately.

■ Vertical wind direction adjustment

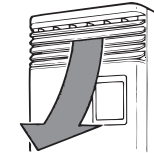
For cooling (COOL)

Move the louvers manually and point it horizontally to send cool air across the entire room.

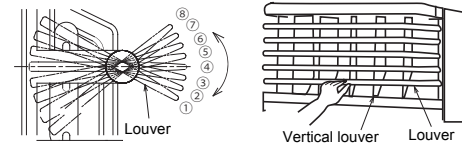


For heating (HEAT)

Move the louvers manually and point it downward to send heated air to the floor.



How to change the louver angle

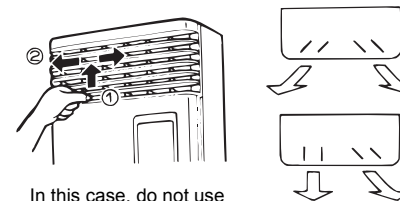


The louvers can be adjusted at 8 phases linking with 5 louvers. When changing the louver angle, hold near the center of louver and move it slowly.

■ Horizontal wind direction adjustment

Selecting positions of horizontal air flow direction

Lift up the vertical louvers slightly and point them in your preferred directions.



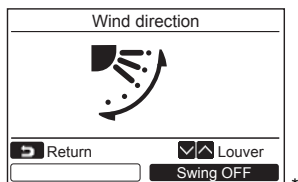
In this case, do not use the swing function.

■ Setting and releasing the horizontal air flow direction



- 1 Push the [MENU] button.
- 2 Push the [↑/↓] button to select "1. Wind direction" on the menu screen, then push the "Set" [F2] button.

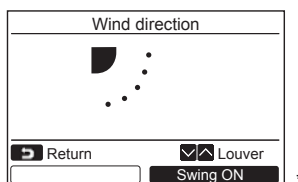
To swing louvers horizontally



* When the vertical louver is stopped, "Swing ON" is displayed.

- 1 Push the "Swing ON" [F2] button on the "Wind direction" screen.
- 2 Push the [CANCEL] button.
→The screen returns to the menu screen.

To stop the louver swing



* When the vertical louver is swinging, "Swing OFF" is displayed.

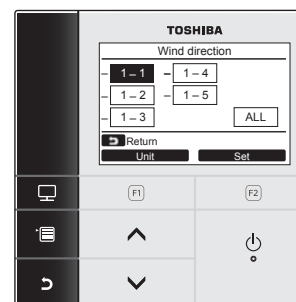
- 1 Push the "Swing OFF" [F2] button on the "Wind direction" screen.
→Push the "Swing OFF" [F2] button to stop swinging. The louver stops in the position where the button is pushed.
- 2 Push the [CANCEL] button.
→The screen returns to the menu screen.

NOTE

- If pointing louvers downward for cooling, dew may form on the surface of the cabinet or louvers and may drop down.
- If pointing louvers horizontally for heating, the room temperature may be uneven.
- Do not change the louver manually during swing operation. Doing so may cause a trouble of the louver related parts. To change the louver position, stop an air conditioner and confirm its operation completely stops.
- For group control status, refer to the "Group control".

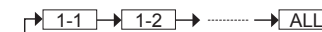
■ Group control

"Swing operation" can be set individually for each unit when the operation is in group control. Operate the remote controller according to the procedure below before setting each function.

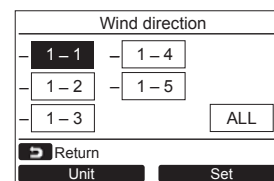


- 1 Push the [MENU] button during operation. Push the [↑/↓] button to select "1. Wind direction" on the menu screen, then push the "Set" [F2] button.

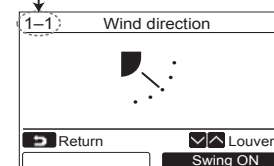
- 2 Push the "Unit" [F1] button to select the unit to set.
→The selected unit changes as follows each time the button is pushed:



- 3 Push the "Set" [F2] button.
→The setting display for the selected unit appears.
- 4 Push the "Swing ON" [F2] button on the "Wind direction" screen.
- 5 Push the [CANCEL] button.
→Pushing the [CANCEL] button returns to the previous screen.



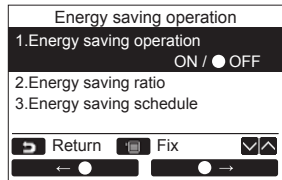
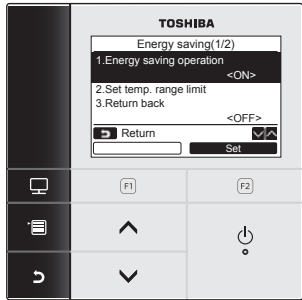
Address is displayed here.



- The number (address) of the selected unit appears on the upper left of the screen, unless "ALL" is selected for the unit selection.

7 Energy saving operation

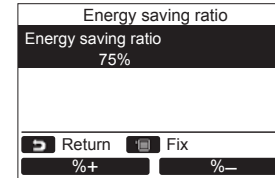
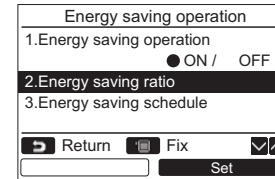
Perform the power saving operation of the air conditioner.



- 1 Push the [MENU] button.
- 2 Push the [▲ ▲] / [▼ ▼] button to select "9. Energy saving" on the menu screen, then push the "Set" [F2] button.
- 3 Push the [▲ ▲] / [▼ ▼] button to select "1. Energy saving operation" on the "Energy saving" screen, then push the "Set" [F2] button.
- 4 To start the Energy saving operation: After setting "2. Energy saving ratio" and "3. Energy saving schedule", push the "← ●" [F1] button to select "ON", then push the [MENU] button. To stop the Energy saving operation: Push the "● →" [F2] button to select "OFF", then push the [MENU] button.

Energy saving ratio

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



- 1 Push the [▲ ▲] / [▼ ▼] button to select "2. Energy saving ratio" on the "Energy saving operation" screen, then push the "Set" [F2] button.
- 2 Push the "%+" [F1] / "%-" [F2] button to set the value.
→ The Energy saving ratio can be set within the range from 50% to 100% by 1%. The lower the value is set, the higher the power saving effect becomes.
- 3 Push the [MENU] button.
→ "Setting" appears on the screen, then the screen returns to the "Energy saving operation" screen.

NOTE

- Cooling / heating performance may be reduced a little because its power is saved during the Energy saving operation.
- "Setting" appears on the display when the Energy saving operation is activated.
- The Energy saving operation cannot be set on the sub remote controller when the two remote controller system is used.
- For Energy saving schedule operation, refer to the separate Owner's Manual for remote controller.
- The remote controller may not be used for setting the Energy saving operation depending on the settings of the central control remote controller or the outdoor unit.
- For "2. Set temp. range limit", "3. Return back", or "4. Saving operation", refer to the separate Owner's Manual for remote controller.

8 Maintenance

⚠ WARNING


For daily maintenance including air filter cleaning, make sure to ask the qualified service person. Do not attempt it by yourself.

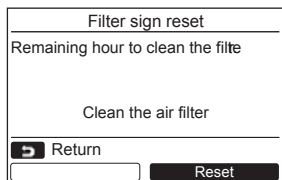
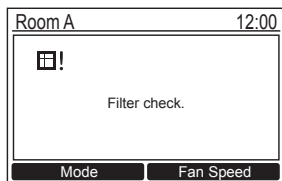
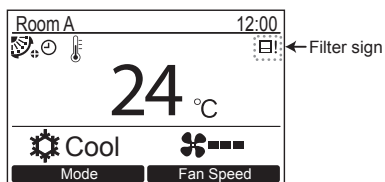
Cleaning air filters


Clogged air filters will reduce the cooling and heating performance.







- For cleaning the air filter, refer to the Installation Manual.

Filter sign reset


“” (filter sign) appears on the detailed display (not displayed when it is in the normal display mode) to tell the time for cleaning the filter.



- “Filter check” is displayed on the screen if you start running the air conditioner when “” (filter sign) appears on the detailed display. Push one of the operation buttons to erase the message or wait for more than 5 seconds until the message disappears.

- 1 Push the [ / ] / [ / ] button to select “Filter sign reset” on the menu screen, then push the “ Set” [ F2] button.
- 2 Push the “ Reset” [ F2] button.

When the unit will not be used for a long time

1. Perform the fan operation for a couple of hours to dry inside.
2. Press [ ON/OFF] on the remote controller to stop running, and turn off the circuit breaker.
3. Clean the air filters and reinstall them.
4. When an outdoor unit using R32 refrigerant is combined, turn on the circuit breaker to detect the refrigerant leak.
 - * When an outdoor unit using R410A refrigerant, leave the circuit breaker turned off.

Check periodically

- If the unit is used for a long time, parts may deteriorate and cause malfunction or bad drainage of dehumidified water depending on the heat, humidity, or dust.
- In addition to the usual maintenance, it is recommended that you have the unit checked and maintained by the dealer where you purchased it.

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"> • Clean the filter with water or a vacuum cleaner. • 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	Wipe off dirt with a soft cloth.
Drain pan	Indoor	Dust / dirt clogging, drain contamination	Clean the drain pan and check the downward slope for smooth drainage.
Front panel, louvers	Indoor	Dust / dirt, scratches	Wash them when they are contaminated or apply repair coating.
Exterior	Outdoor	<ul style="list-style-type: none"> • Rust, peeling of insulator • Peeling / lift of coat 	Apply repair coating.

■ Replacing a refrigerant leak detection sensor

WARNING

If check codes “J29” or “J31” appear on the remote controller LCD (Liquid Crystal Display), replace a refrigerant leak detection sensor. Contact the dealer where you purchased the air conditioner to replace the refrigerant leak detection sensor. Continuing to use the air conditioner without replacing the sensor may cause a fire in case refrigerant leak occurs.

Check code “J29” appears when the sensor trouble is detected.

Check code “J31” appears when the sensor is out of the life of the product.

Contact the dealer where you purchased the air conditioner to replace the refrigerant leak detection sensor.


● Check period and Maintenance period

Check period:	One year
Maintenance period: (Replacement)	Five years

* Places where a lot of siloxanes are present (Hair salon) require periodic maintenance for sensor since there is a possibility that refrigerant leak detection sensor won't be able to work.

9 Troubleshooting

Check the points described below before requesting repair.

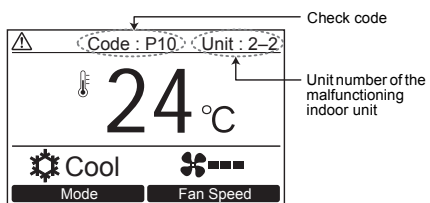
Symptom		Cause
It is not a malfunction.	Outdoor unit	<ul style="list-style-type: none"> White, misty, cold air or water comes out. Sometimes the noise of air leaking is heard. A noise is heard when the power is turned on.
	Indoor unit	<ul style="list-style-type: none"> Sometimes a swishing is heard. A clacking sound is heard. Discharged air smells unusual.
Check again.		<ul style="list-style-type: none"> The fan of the outdoor unit is automatically stopped and defrosting is performed. The solenoid valve works when defrosting starts or stops. The outdoor unit is preparing for running.
	The room does not cool down or warm up.	<ul style="list-style-type: none"> When the unit starts running, during operation, or immediately after the unit stops running, a sound such as water flowing may be heard, or the operation sound may become louder for a couple of minutes immediately after the unit starts running. This is the sound of the refrigerant flowing or the dehumidifier draining. This is a sound generated when the heat exchanger, etc. expands and contracts slightly due to temperature change. Various smells from the walls, carpet, clothes, cigarette, cosmetics, etc. adhere to the air conditioner.
	The unit does not run	<ul style="list-style-type: none"> Has a blackout occurred? Has the circuit breaker blown? Has the protective device been activated?
		<ul style="list-style-type: none"> 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 fan speed set to “Low”? Or is the operation mode set to “Fan”? Is the setup temperature appropriate?
	<ul style="list-style-type: none"> A fan of the indoor unit does not stop even if [ ON/OFF] button is pushed. Check code “J30” appears on the remote controller LCD. 	<ul style="list-style-type: none"> Refrigerant may leak from the indoor unit. Do not turn off the circuit breaker and ventilate the room, and then contact the dealer where you purchased the product. Do not use gas equipment (propane, butane, or methane) or sprays near indoor unit. Doing so may cause the sensor to detect refrigerant leak mistakenly. Contact the dealer where you purchased the product.
	Check code “J29” appears on the remote controller LCD.	Refrigerant leak detection sensor is in trouble. Since the sensor may need replacing, contact the dealer where you purchased the product.
	Check code “J31” appears on the remote controller LCD.	The refrigerant leak detection sensor exceeds the life of the product. Contact the dealer where you purchased the product to replace the sensor.

If there is something unusual even after checking the above, stop running the unit, turn off the circuit breaker, and contact 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 code 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.

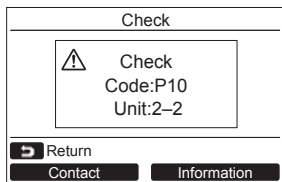
■ Confirmation and check



When a trouble has occurred in the air conditioner, the check code and the unit number of the indoor unit appear on the display of the remote controller.

* The check code appears only while the unit is running.

Push the [MONITOR] button or [CANCEL] button to display the check information screen.



While the check information screen appears:
 Push the "Contact" [F1] button to display the contact number for service.
 Push the "Information" [F2] button to display the model name and serial number of the unit.

* When *Check code "J31" appears on the remote controller LCD, contact the dealer where you purchased the product to replace the refrigerant leak detection sensor.

10 Operations and Performance

▼ Check before running

- Check whether the earth 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 re-starting 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.

▼ 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 discharge 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.
- When an outdoor unit using R32 refrigerant is combined, in order to detect refrigerant leak, do not turn off the circuit breaker even if air conditioner will not be operated for long time.

▼ 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.

▼ **Refrigerant leak detection sensor**

- When R32 refrigerant leak is detected, check code "J30" appears on the remote controller LCD during operation and the fan is automatically operated at high speed.
Do not turn off the circuit breaker and ventilate the room, and then contact the dealer where you purchased the product.
- If the circuit breaker is turned off during displaying check code "J31" (out of the life of the product for the refrigerant leak detection sensor), "J29" (the refrigerant leak detection sensor trouble) may appear when the circuit breaker will be turned on again. Contact the dealer where you purchased the product whichever the check code appears.

▼ **Air conditioner operating conditions**

For proper performance, operate the air conditioner under the following temperature conditions:
Refer to the combined outdoor unit Installation Manual for details about the outdoor temperature.

Cooling operation	Room temperature	: 21 °C to 32 °C (Dry bulb temp.), 15 °C to 24 °C (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	Room temperature	: 15 °C to 28 °C (Dry bulb temp.)

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

11 Installation

Do not install the air conditioner in the following places

- Do not install the air conditioner in any place within 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 (sewing machine or massager for business use, etc.), otherwise the air conditioner may malfunction.
- 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 (air vent, lighting equipment, etc.) 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.
- 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 cause a fire.
- Do not install the air conditioner in a place where smoke, chemical agent, or organic solvent is present. The refrigerant leak detection sensor mistakenly operates, causing air conditioner not to operate.

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 neighbors.
- 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.

12 Specifications

Model	Sound pressure level (dB(A))		Weight (Kg)
	Cooling	Heating	
RAV-RM561FT-EN/ES	*	*	44
RAV-RM801FT-EN/ES	*	*	45
RAV-RM1101FT-EN/ES	*	*	59
RAV-RM1401FT-EN/ES	*	*	59
RAV-RM1601FT-EN/ES	*	*	59

* Under 70 dB(A)

Product information of ecodesign requirements. (Regulation (EU) 2016/2281)
<http://ecodesign.toshiba-airconditioning.eu/en>

Declaration of Conformity

Manufacturer: TOSHIBA CARRIER CORPORATION
 336 Tadehara, Fuji-shi, Shizuoka-ken 416-8521 JAPAN

TCF holder: TOSHIBA CARRIER EUROPE S.A.S
 Route de Thil
 01120 Montluel FRANCE

Hereby declares that the machinery described below:

Generic Denomination: Air Conditioner

Model / type: RAV-RM561FT-EN, RAV-RM561FT-ES
 RAV-RM801FT-EN, RAV-RM801FT-ES
 RAV-RM1101FT-EN, RAV-RM1101FT-ES
 RAV-RM1401FT-EN, RAV-RM1401FT-ES
 RAV-RM1601FT-EN, RAV-RM1601FT-ES

Commercial name: Digital Inverter Series, Super Digital Inverter Series Air Conditioner

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

NOTE

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

Toshiba Carrier Corporation

336 TADEHARA, FUJI-SHI, SHIZUOKA-KEN 416-8521 JAPAN

EH99962001