

# OWNER'S MANUAL



# TOSHIBA

## AIR CONDITIONER

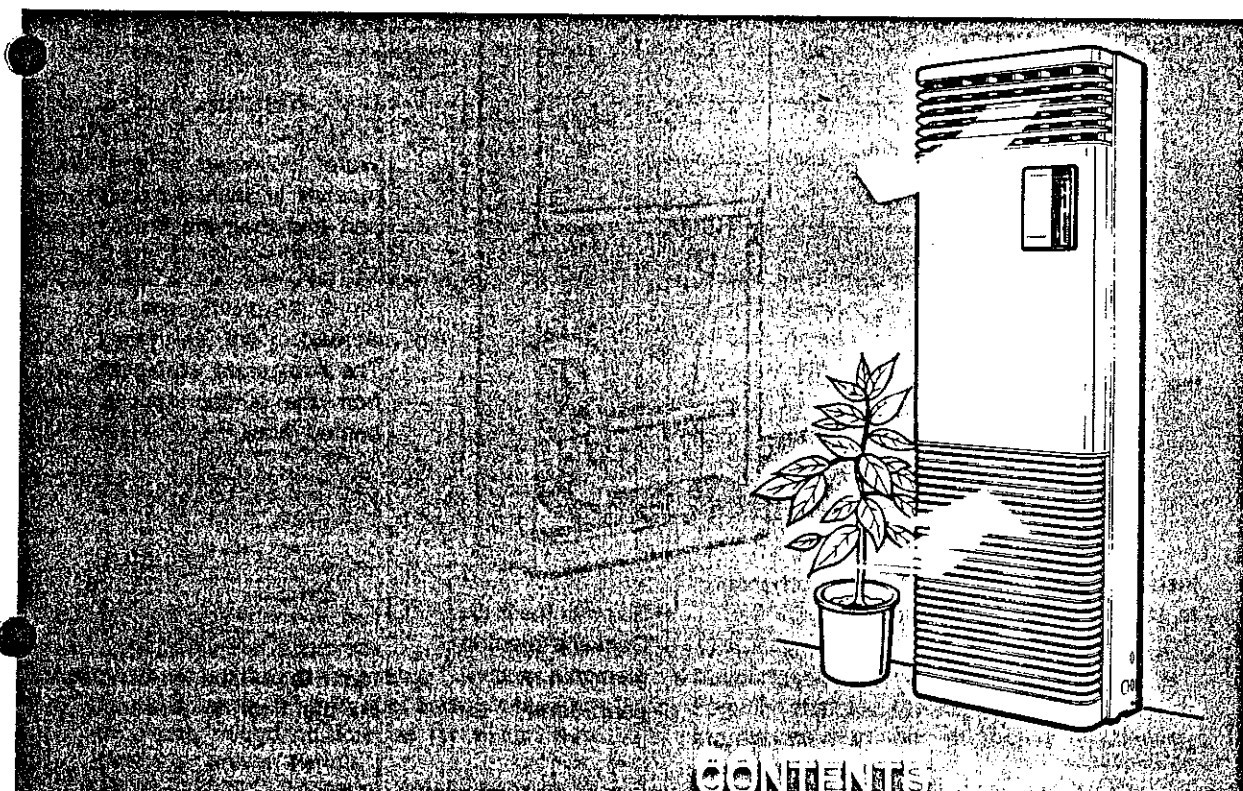
HEAT PUMP  
SPLIT (Floor Type)

Indoor Unit

RAV-710FHE8  
RAV-1000FHE8  
RAV-1250FHE8

Outdoor Unit

RAV-S710HE8  
RAV-S1000HE8  
RAV-S1250HE8



## CONTENTS

Thank you for your purchase of TOSHIBA AIR-CONDITIONER. For proper use of your air-conditioner, carefully read this owner's manual. Keep this manual for future reference.

PARTS AND FUNCTIONS	1
PRECAUTIONS	2
HANDLING INFORMATION	3
NAMES AND FUNCTIONS OF CONTROLS	4
OPERATION	5
AIR FLOW DIRECTION CONTROL	7
CARE INFORMATION	8
TROUBLESHOOTING	10
GUIDE FOR LONG SERVICE LIFE	11
REPAIR SERVICE	13
SPECIFICATIONS	14

# PARTS AND FUNCTIONS

## Indoor Unit

### Air Outlet

The air is discharged through this port. For details, refer to AIR FLOW DIRECTION CONTROL.

### Vertical Grilles

These grilles can be moved automatically to periodically swing the air flow in the lateral direction.

For details, refer to AIR FLOW DIRECTION CONTROL.

### Upper Cabinet

### Air Heat Exchanger

### Drain Receiver

### Air Filter

The room air is taken in through this filter to remove the dust.

### Air Intake Grille

Installed in front of the air heat exchanger to take in the room air through it.

### Lower Cabinet

### Installation Fixture

Used to fix the air-conditioner on the wall.

### Horizontal Grilles

Used to perpendicular adjust the air flow direction.

### Operation Panel

Start / stop and control of the air-conditioner is done from this panel.

For details, refer to OPERATING METHOD.

Port for power wiring to an optional electric heater.

Drain Port (right, left, or rear as desired)

Water collected in the drain receiver is drained through this port and then the drain piping.

Refrigerant Pipe Connection (right, left, rear, or bottom as desired)

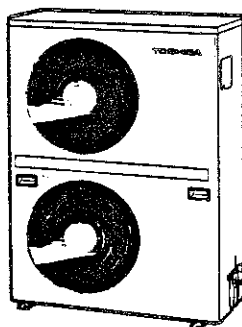
The refrigerant piping to and from the outdoor unit is connected here.

Electric Parts Box  
Contains electric elements and earth screw.

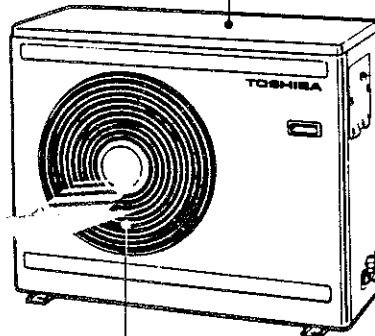
Installation Fixtures (on both right and left sides)

Used to fix the air-conditioner on the floor to prevent a fall.

## Outdoor Unit



(S1000HE8)  
(S1250HE8)



(S710HE8)

### Air intake

### Power supply box

Contains electrical parts and earth screw inside.

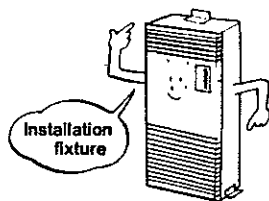
### Refrigerant line connections

Accepts a pipe that carries a coolant gas to cool room air. Protect against shock or damage.

### Air outlet

Blows off hot air while cooling or cool air while heating.

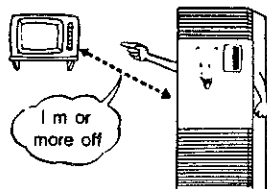
# PRECAUTIONS



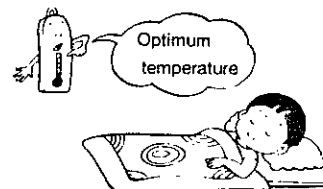
- Make sure that the indoor unit is fixed on the floor and wall with installation fixtures. If not, promptly ask an installation executor for their fixing. Never remove the installation fixtures. Otherwise, the unit may fall down.



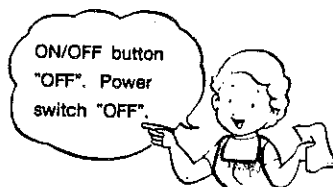
- Before starting operation, be sure to put on the air filter at the air intake. When used in a dusty place, clean the filter every two weeks or so.



- Keep a TV, radio, or the like at least 1 m off the indoor unit. Otherwise, the picture may get disturbed, or the noise may result.



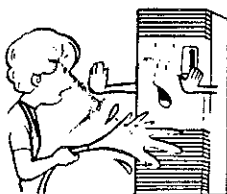
- When used in a room of a physically handicapped person, infant, children, the aged, or sick person, exercise a great care to maintain a comfortable temperature.



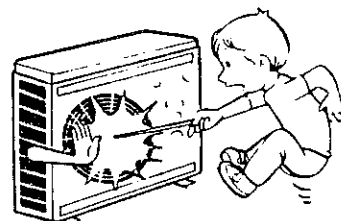
- When doing the maintenance work of the air-conditioner or when suspending operation for a long period of time as for a trip, turn OFF the power switch.



- Never touch moving vertical grilles. Forcibly stopping the vertical grilles by holding causes a trouble to the air-conditioner.



- Do not sprinkle water on the air-conditioner for cleaning. Sprinkling water on the unit deteriorates insulation causing an electric shock.



- Do not insert a stick or the like into the air intake and outlet of the indoor and outdoor units. It is very dangerous because a high-speed fan is installed inside.

## HANDLING INFORMATION

(Make sure that the indoor unit is fixed on the floor and wall with installation fastening.)

- To get maximum performance out of your air conditioner, be sure to run it only under the following conditions:

	Ambient temperature	Room temperature	Room relative humidity
<b>Cooling operation</b>	21°C or more but 43°C or less Running the air conditioner at ambient temperatures above 43°C could trip a protective device, thereby inhibiting cooling operation. Running at temperatures lower than 21°C could cause a freeze to occur in the indoor unit, resulting in failure.	21°C but 32°C or less Running the air conditioner at room temperatures lower than 21°C could cause a freeze to occur in the indoor unit, resulting in failure. Also, extended periods of service at temperatures above 32°C might trip a protective device, thereby inhibiting cooling operation.	80% or less Extended periods of service at relative humidities above 80% might cause dew to be condensed and dripped over the air conditioner surfaces.
<b>Heating operation</b>	21°C or less Running the air conditioner at ambient temperatures above 21°C could trip a protective device, thereby inhibiting heating operation.	28°C or less Running the air conditioner at room temperatures above 28°C under conditions of high ambient air temperature could trip a protective device, thereby inhibiting heating operation.	

## ● Heating Capacities

This air conditioner permits selecting between cooling and heating operation with a single switch. In heating, it operates on the principle of a heat pump, which absorbs heat from outdoors and discharges it indoors. As a result, the heating capacity tends to decline with drops in ambient air temperature as shown in the table below.

When ambient air temperature is low, your air conditioner may be run with the aid of a heating apparatus. A circulator may also be installed when the temperature difference between the ceiling level and the floor level is marked during heating operation.

		Heating capacity (Btu/h) (50Hz)		
Room temperature	Ambient air wet-bulb temperature	RAV-710FHE8	RAV-1000FHE8	RAV-1250FHE8
21°C	10°C	29,400	40,200	51,400
	6°C	27,200	37,200	47,600
	0°C	23,200	31,600	40,400

The indicated room temperature of 21°C and ambient air wet-bulb temperature of 6°C comply with Japanese Industrial Standards (JIS B8615).

# NAMES AND FUNCTIONS OF CONTROLS

## FILTER Lamp (Red)

Goes on to indicate that air filter cleaning is required.

## FILTER RESET Button

Press this button after air filter cleaning is finished. The FILTER lamp will go off. (See page 8 for further information.)

## DEFROST Lamp (Green)

Stays on while heating to indicate that the outdoor unit is being defrosted. It will flash on and off when the power switch is turned on and when the air conditioner is restarted after a power failure, but it will go off when the air conditioner has started running.

## Auto Louver ON/OFF knob

When turn ON, the vertical grilles swing to laterally swing the air flow. You can stop the vertical grilles at any position. So, turn it OFF when a desired air flow direction is reached.

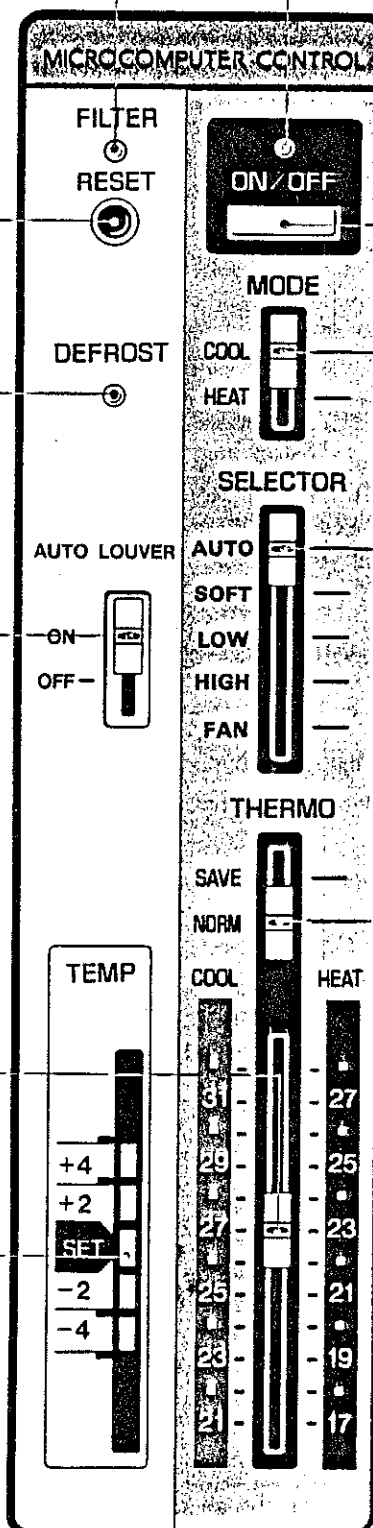
For details, refer to AIR FLOW DIRECTION CONTROL.)

## ROOM TEMPERATURE CONTROL Switch

Used to control room temperature. Values indicate rough temperature settings.

## PRESENT ROOM TEMPERATURE MONITOR Lamps

Indicate deviations of the present room temperature from its setting. + side lamps go on when the present room temperature is higher than its setting, or - side lamps go on when it is lower.



## Operation Lamp (Red)

Stays on while the air conditioner is in operation. It will flash on and off when the hand power switch is turned on and when the air conditioner is restarted after a power failure, but it will go off when the air conditioner has started running.

## RUN/STOP Button

Press this button to start the unit; press again to stop.

## MODE Select Switch

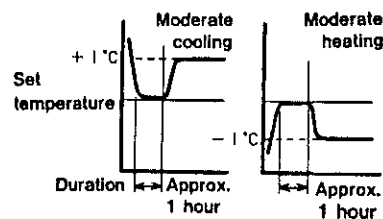
Set the switch to COOL for cooling operation, to HEAT for heating operation.

## AIRFLOW SELECT Switch

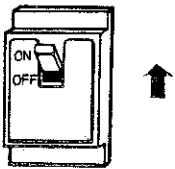
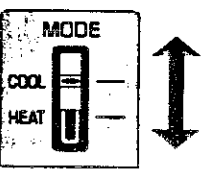
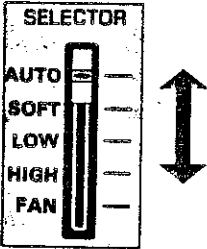
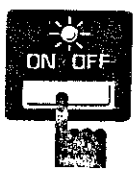
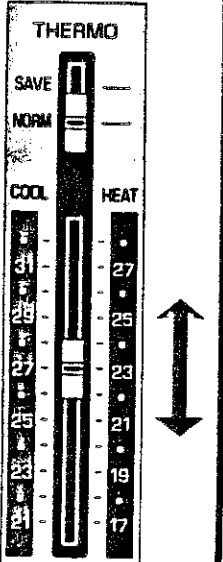
Selects the quantity of airflow. AUTO automatically changes airflow to fit room temperature. Set to FAN when only blowing operation is desired.

## MODERATE Power Saver Switch

With the switch being set at SAVE the air conditioner keeps the room temperature at 1°C above the set temperature while cooling, or at 1°C below the set temperature while heating, about 1 hour after the setting is reached.



# OPERATION

	Control	Cooling Operation	Heating Operation	Blowing Operation
1	<b>Power switch</b> 	Turn on the power switch.	Turn on the power switch.	Turn on the power switch.
2	<b>MODE</b> 	Set the MODE Select Switch to COOL.	Set the MODE Select Switch to HEAT.	The MODE Select Switch may be set at either COOL or HEAT.
3	<b>SELECTOR</b> 	Set the AIRFLOW SELECT Switch to AUTO, SOFT, LOW, or HIGH at your choice.	Set the AIRFLOW SELECT Switch to AUTO, SOFT, LOW, or HIGH at your choice.	Set the AIRFLOW SELECT Switch to FAN.
4		Press the push button switch.	Press the push button switch.	Press the push button switch.
5	<b>THERMO</b> 	Set the ROOM TEMPERATURE CONTROL Switch to a desired temperature. The cooling temperature scale is on the left.	Set the ROOM TEMPERATURE CONTROL Switch to a desired temperature. The cooling temperature scale is on the right.	This switch has no effect on blowing operation.

To stop the air conditioner, press the ON/OFF button again.

## ● Operating Instructions

- Your air conditioner may not start cooling or heating immediately after the ON/OFF button is pressed. Allow for about 3 minutes to let the air conditioner start running automatically. Also, the air conditioner, when restarted, will only blow air for a period of about 3 minutes before cooling or heating operation is resumed.
- Avoid frequent mode transfers between cooling and heating, which may cause a trouble.
- The air conditioner is liable to malfunction due to abnormal signals caused by lightning or car radio. To protect against such malfunction, set the power switch to OFF, then to ON again.

## ● Auto-Defrost Operation

- During heating operation in the winter, the heat exchanger in the outdoor unit may be frosted under the condition of low ambient air temperature, with the result of declining heating capacity. The air conditioner automatically carries out defrosting in the winter.
- During defrosting operation, the DEFROST lamp stays on and the blowers in the indoor and outdoor units are stopped. An opaque, misty current of chilled air may be found to arise from the outdoor unit at this time, but this is not a sign of failure.
- Defrosting operation is completed in less than 10 minutes.
- The DEFROST lamp may also go on for a few minutes at the start of a cooling operation or under control of the THERMOSTAT switch. It simply indicates that the air conditioner is being preheated.

## ● Heating Operation

- If the room is not heated sufficiently during heating operation, check out the air conditioner to see if it has been set up correctly. (See page 11.)
- The use of a circulator is recommended to provide adequate circulation of heated air down to the floor level during heating operation. Check with the dealer from whom your air conditioner was purchased for installation of a circulator.

## ● Protective Device (High-Pressure Switch)

Automatically shuts down the air conditioner when it is overheated.

The protective device may be tripped in any of the following situations.

### While Cooling

- The air intake or outlet of the outdoor unit is blocked.
- The ambient temperature at which the outdoor unit is in operation is 43°C or higher.
- The air conditioner has been run over extended periods of time at room temperatures above 32°C.
- The air outlet of the outdoor unit has been exposed to strong gusts of wind.

### While Heating

- The ambient temperature at which the outdoor unit is in operation is 21°C or higher.
- The ambient temperature is high and the room temperature exceeds 28°C.
- The air filter is clogged with an unusually large amount of dust or dirt.
- The air outlet of the indoor unit is blocked.

To reset the protective device:

1. Turn off the power switch.
2. Remove the condition that caused the protective device to be tripped.
3. Turn on the power switch, and restart the air conditioner as instructed in OPERATION, page 5.

# AIR FLOW DIRECTION CONTROL

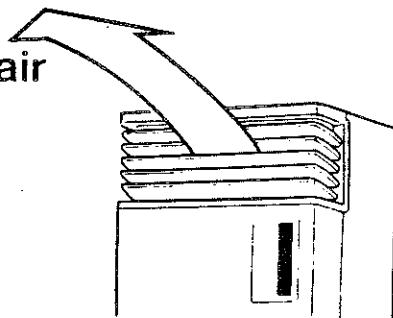
For comfortable air conditioning, operate the air conditioner in the same temperature.

## How to control air flow direction

### ● Perpendicular direction

#### Cooling

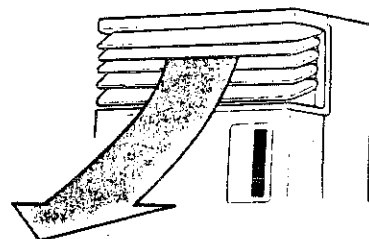
Cool air



- Turn up the horizontal grilles at the air outlet.

#### Heating

Hot air



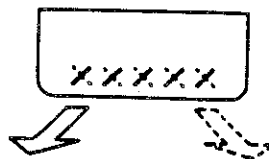
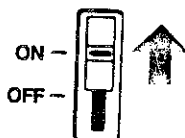
- Turn down the horizontal grilles at the air outlet.

### ● Lateral direction

### ● Swinging air flow

Set the auto louver ON/OFF knob to the ON position. The vertical grilles swing to laterally swing the air flow.

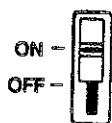
AUTO LOUVER



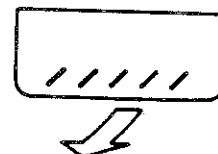
### ● Fixed air flow direction

Set the auto louver ON/OFF knob to the ON position, and then turn it OFF when a desired air flow direction is reached.

AUTO LOUVER



AUTO LOUVER



### ● Distributed air flow

Vertical grille



Lift a vertical grille and turn it to a desired direction.  
Then, release a hand.

### Example:

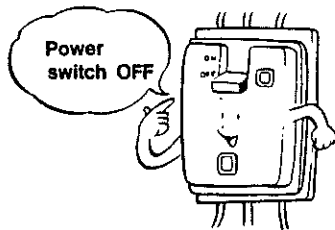




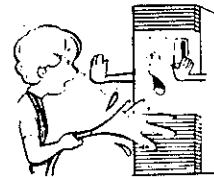
## CARE INFORMATION

### CAUTIONS

Turn the power switch off before starting to maintain your air conditioner.



To prevent degraded electrical insulation, never try to clean the air conditioner by directly spraying it with water.



### ● Air Filter Maintenance

Airflow is reduced and cooling or heating efficiency is lost as the air filter is clogged with dust. Clean the air filter whenever the FILTER lamp goes on. It goes on automatically after about 120 hours of uninterrupted service. Clean the filter every two weeks if the air conditioner has been run in an especially dusty place.

### CAUTION

The timer counter will be reset to 0 when a power failure occurs or when the main power switch is turned OFF during cooling or heating operation. As a result the FILTER lamp stays off even if the air conditioner has been run over about 120 hours.

### ● Removing the Air Filter

The air filter is found inside the air inlet of the internal unit. Lifting the inlet up, pull the filter out rearward.

### ● Resetting the Filter

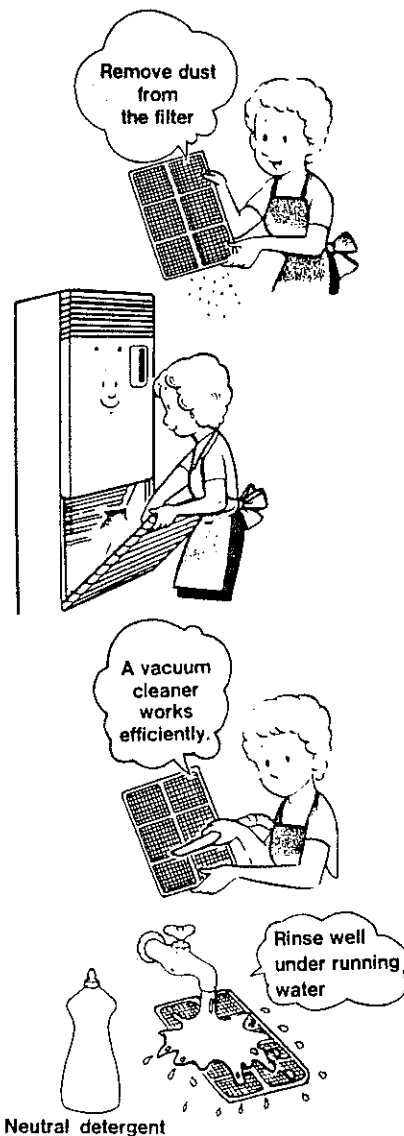
Press the filter RESET button after fitting the air filter into original position. (The FILTER lamp will go off and the timer counter is reset to 0.)

### ● Cleaning the Air Filter

To remove dust from the air filter, use a vacuum cleaner or tap it lightly. If the filter is very dirty, immerse in lukewarm water or cold water and wash it by moving it up and down. A neutral detergent solution may simplify this work. After washing, rinse the filter with water and leave it in the shade to dry thoroughly.

### CAUTION

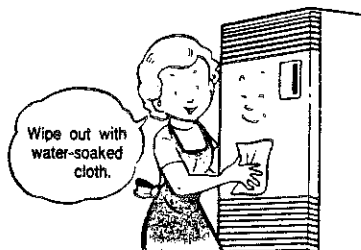
Avoid using hot water at a temperature of 40°C or higher, can cause the filter to be deformed or discolored.



## Cleaning Air Intake Grille and Cabinet

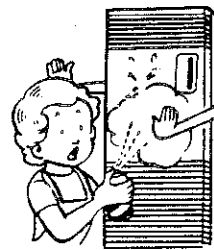
When the air intake grille and cabinet get stained, wipe off a stain with cloth soaked with water of 40°C or below.

Using cloth soaked with neutral detergent will be more effective. When using neutral detergent, wring a soft, water-soaked cloth, and then completely wipe off detergent with the cloth.



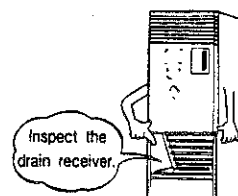
### Caution

Do not use gasoline, benzene, thinner, or any other similar chemicals for cleaning. Also, never spray an insecticide available on the market. Using these chemicals causes a peel of coating, or cracks in or deformation of plastic.

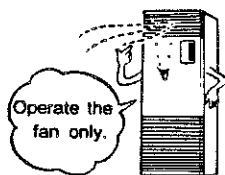


## Drain Receiver Inspection

The drain receiver collects water removed from the air. Clogging a port in the receiver with dust and foreign matters causes an overflow of collected water. Therefore, check it once a month.



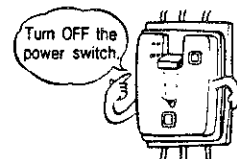
## Cleaning after Season



- Operate the fan only half a day long to dry up the inside.

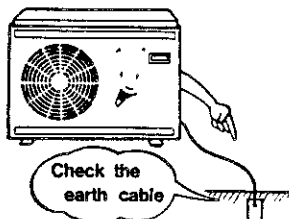


- Clean the air filter, and dry it up. Then put it back in place.



- Turn OFF the power switch.

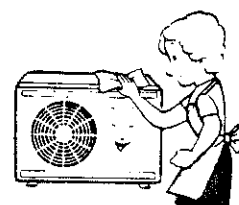
## Cleaning before Season



- Check the earthing wire for a breaking or disconnection.



- Refer to PRECAUTIONS.



- Wipe off the dust from the outdoor unit.

## Inspection and Maintenance

When the air-conditioner is used several seasons, the inside gets stained with a consequent drop in performance although its extent varies depending on working conditions. Therefore, in addition to the ordinary cleaning described here, another inspection and maintenance is recommended. For this inspection and maintenance, consult with the seller. This service is given at actual cost.

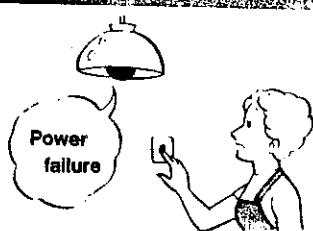
# TROUBLESHOOTING

Before requesting service, check the following points.

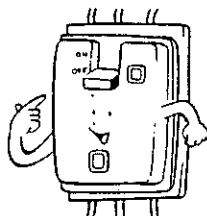
## ● These are not failures.

- In heating operation, the indoor and outdoor blowers may be stopped. With the outdoor unit being frosted, depending on the temperature and humidity of ambient air. Then, an opaque, misty current of chilled air may be found to arise from around the outdoor unit. This simply signals that the air conditioner is automatically defrosting.
- When heating operation restarts after it has been suspended with the auto-defroster at work, opaque, misty air or chilled air may blow off temporarily from the air outlet of the indoor unit.

## ● If your air conditioner does not run.

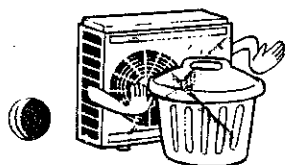


- Suspect a power failure.

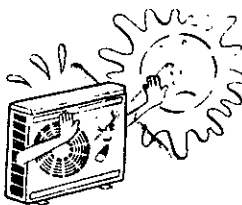


- Power fuse blown or circuit breaker tripped.

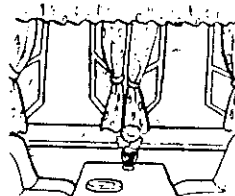
## ● If your air conditioner blows air but does not cool well.



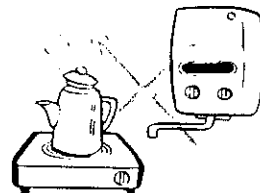
- Outdoor unit air intake or outlet blocked or poorly ventilated.



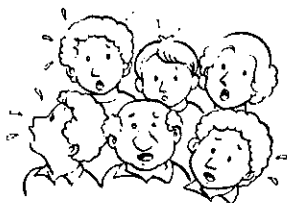
- Outdoor unit overheated under exposure to direct sunlight or heat sources.



- Door or window left open.



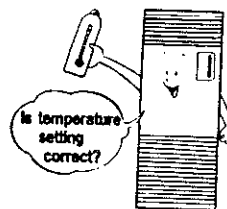
- Heating apparatus, such as a water heater and an oven, used in the room.



- Room overcrowded.

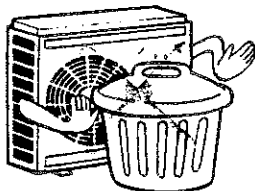


- Air filter clogged with dirt or dust.

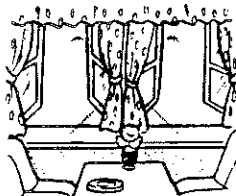


- SELECTOR switch at FAN position. With the SELECTOR switch being set at AUTO, SOFT, LOW, or HIGH at your choice, adjust the ROOM TEMPERATURE CONTROL switch to a lower temperature.

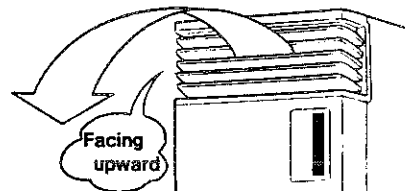
● If your air conditioner blows air but does not heat well.



- Outdoor unit air intake or outlet blocked or poorly ventilated.



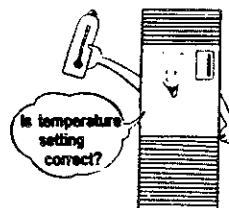
- Door or window left open.



- Air outlet facing upward.



- Air filter clogged with dirt or dust.



- SELECTOR knob at FAN position. With the SELECTOR knob being set at AUTO, SOFT, LOW, or HIGH at your choice, adjust the ROOM TEMPERATURE CONTROL switch to a higher temperature.

If the problem still exists after all these checkouts, turn OFF the main power switch and request diagnostics from the dealer from whom your air conditioner was purchased.  
The air conditioner is not customer serviceable.

## GUIDE FOR LONG SERVICE LIFE

For a safe long-term use and comfortable air conditioning, exercise the following cares:

### Installation place

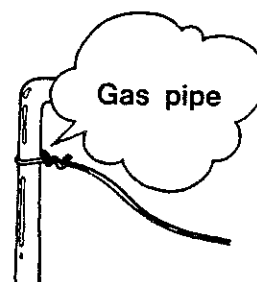
- 1** • Install both indoor and outdoor units in such a place that endures a heavy weight and vibration.
- 2** • The indoor unit is fixed on the floor and wall with installation fixtures to prevent the unit from falling down. Check the clamping screws of the fixtures for any looseness once a year. Never remove these fixtures.
- 3** • Leave an ample room around the air intake and outlet for good ventilation.
- 4** • Run the drain piping in such a way that the indoor unit can discharge the drain (water removed from the air) completely.
- 5** • Do not install in such a place that might be exposed to a leaked combustible gas.
- 6** • Install the outdoor unit in such a place that the hot air and noise from the unit do not bother neighbors.
- 7** • Avoid using the air-conditioner in oily environment (including machine oil environment), saline environment as of a coastal region, and sulfide gas environment as of a hot-spring resort. Otherwise, the air-conditioner will be troubled.  
If installing in such a place is unavoidable, consult with the seller because special measures are required to be taken.

### Wiring

- 1** • Install the earthing wire for protection against an electric shock. For details, consult with the seller where you purchased.
- 2** • Use the power source dedicated to the air-conditioner.
- 3** • A law concerned requires the installation of an earth leakage circuit breaker. For details, consult with the seller or an electric work executor.
- 4** • In the event of a blow-out of the power fuse, replace it with a fuse of a rated ampere. Never use a steel or copper wire. Using such a wire as a fuse causes a trouble to the air-conditioner and a fire.

#### Caution

When the earthing wire is connected to the water service pipe, note that earthing does not work if a vinyl chloride pipe is installed in the water line. Never connect the earthing wire to the gas piping.



### Change of Installation Place

Moving an air-conditioner to another location requires special technique. Therefore, if it is necessary, consult with the seller. You will be charged an actual cost in this case.

## REPAIR SERVICE

- In the event of an occurrence of any abnormality, stop operation, and turn OFF the power switch. Then, consult with the seller.  
When holding a consultation with the seller, inform it of the model of your air-conditioner and the purchase date.
- We keep the repair parts of this air-conditioner for at least nine (9) years after terminating its production.  
The repair parts are those necessary for maintaining its rated functions.
- For details of the repair service, consult with the seller where you purchased.

## Maintenance Service

Utilize our maintenance service to run the TOSHIBA AIR-CONDITIONER under optimum conditions for a long period of time.

- Maintenance is one of essential factors to determine the service life and performance of the TOSHIBA AIR-CONDITIONER.
- For application for or inquiry about the maintenance service, consult with the seller.

# SPECIFICATIONS

Model		RAV-	
		Indoor Unit 710FHE8	Outdoor Unit S710HE8
Power Supply	V-PH-Hz	380/415-3-50	
Cooling	Capacity	BTU/h (kcal/h)	25,200 (6,300)
	Amps	A	4.7
	Watts	kW	2.8
Heating	Capacity	BTU/h (kcal/h)	27,200 (6,800)
	Amps	A	4.4
	Watts	kW	2.6
Refrigerant charge (R-22)*	g	2,000	
Weight	kg	49	78
Dimensions (Height x Width x Depth)	mm	1,750 x 600 x 210	790 x 880 x 310

Model		RAV-			
		Indoor Unit 1000FHE8	Outdoor Unit S1000HE8	Indoor Unit 1250FHE8	Outdoor Unit S1250HE8
Power Supply	V-PH-Hz	380/415-3-50		380/415-3-50	
Cooling	Capacity	BTU/h (kcal/h)	36,000 (9,000)	46,400 (11,600)	
	Amps	A	6.2	8.0	
	Watts	kW	3.7	4.8	
Heating	Capacity	BTU/h (kcal/h)	37,200 (9,300)	47,600 (11,900)	
	Amps	A	5.7	7.6	
	Watts	kW	3.4	4.5	
Refrigerant charge (R-22)*	g	2,700		3,500	
Weight	kg	65	107	65	115
Dimensions (Height x Width x Depth)	mm	1750 x 600 x 390	1240 x 930 x 385	1750 x 600 x 390	1240 x 930 x 385

Specifications are subject to change without notice.

\*The charges are for system with 5-meter interconnecting pipe.



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