

SPLIT TYPE ROOM AIR CONDITIONER

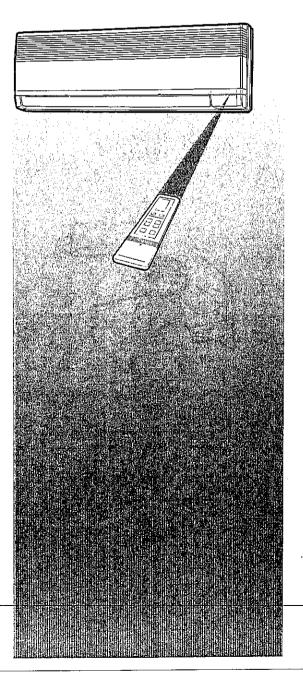
INDOOR UNIT

**OUTDOOR UNIT** 

AY-1802S

**AU-1802Y** 

## **OPERATION MANUAL**



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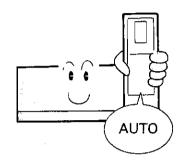
Thank you very much for your purchase of SHARP split type room air conditioner.
Please read this OPERATION MANUAL carefully to use your air conditioner properly before operating, and boom this MANUAL and installation manual bands. and keep this MANUAL and installation manual handy for your reference.

## **FEATURES**

### **■** AUTOMATIC OPERATION

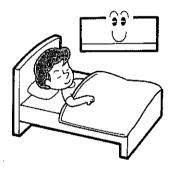
(When each button is set to AUTO)
In AUTO mode, the microcomputer will select HEAT, COOL or DRY mode in consideration of room temperature at starting.

It also sets THERMO. (temperature control) and FAN SPEED automatically.



### AUTO SLEEP FUNCTION

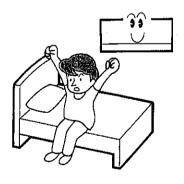
In TIMER OFF mode, the system goes into the AUTO SLEEP FUNCTION and controls the room temperature not to feel too cool or too warm for the sleeping person.



# 3 COMFORTABLE AWAKING FUNCTION

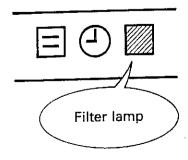
In TIMER ON mode, the system goes into the AWAKING FUNCTION.
The unit will start operating 0-30

The unit will start operating 0-30 minutes earlier than setting time so that the room temperature can reach a desired level by the desired time.



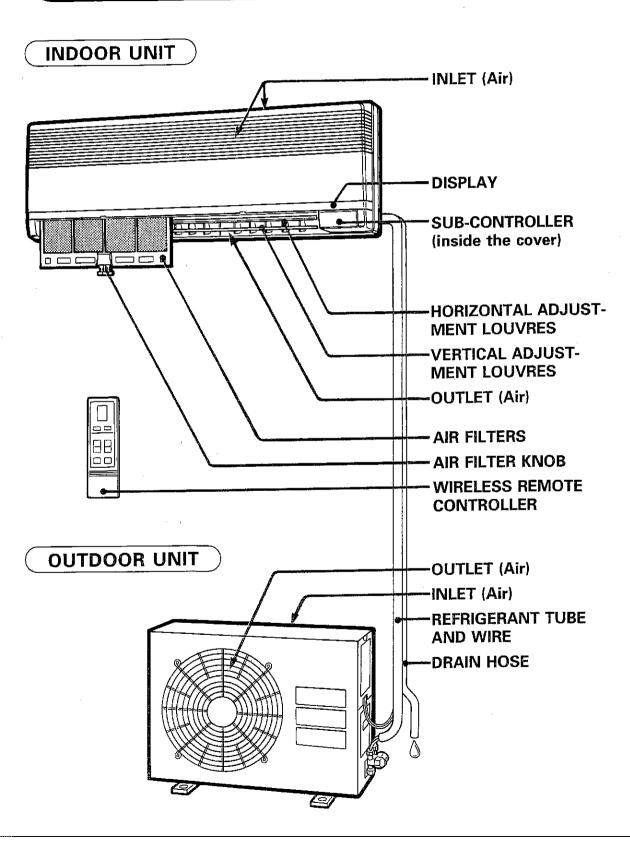
### **★** FILTER LAMP (green)

When the green filter lamp blinks, the air filter requires cleaning.



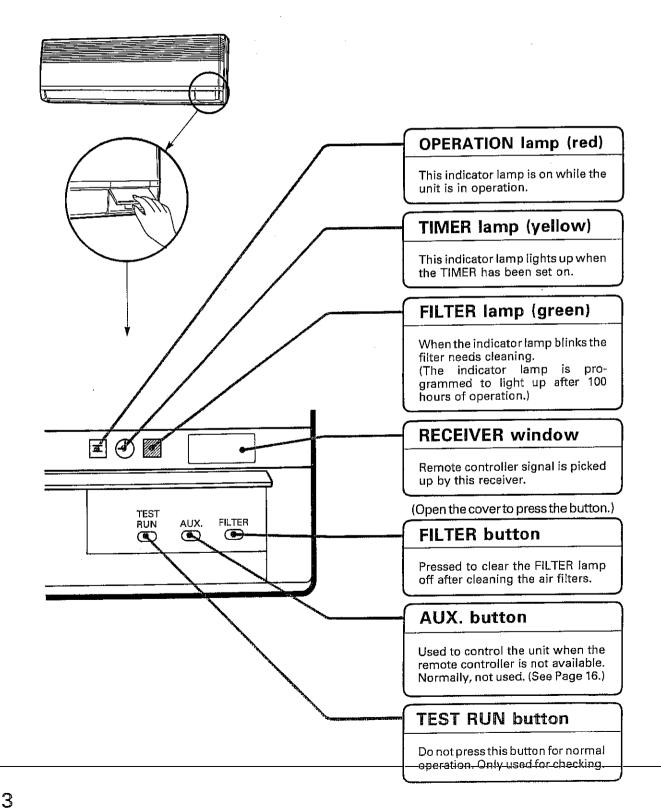
This air conditioner complies with the requirements of AS 3179:1989 and must be installed to comply with AS 3000.

### **NAMES OF PARTS**

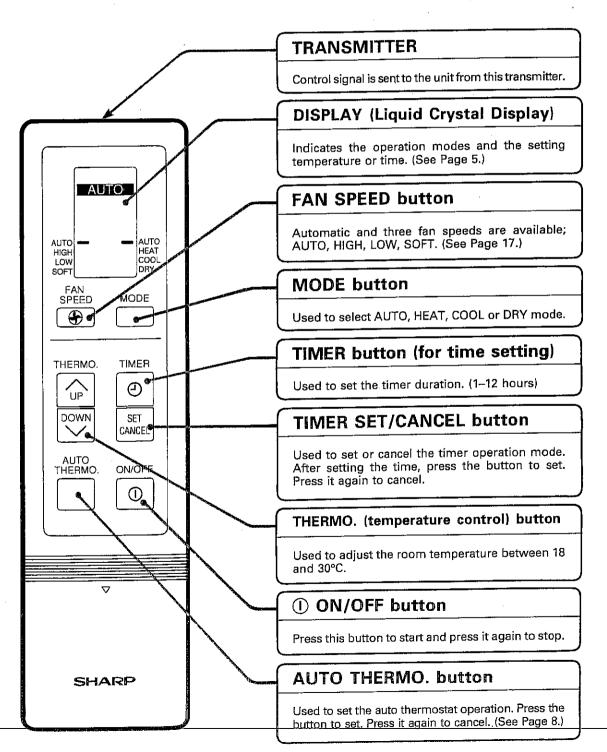


## INDICATORS AND OPERATION

### DISPLAY, SUB-CONTROLLER

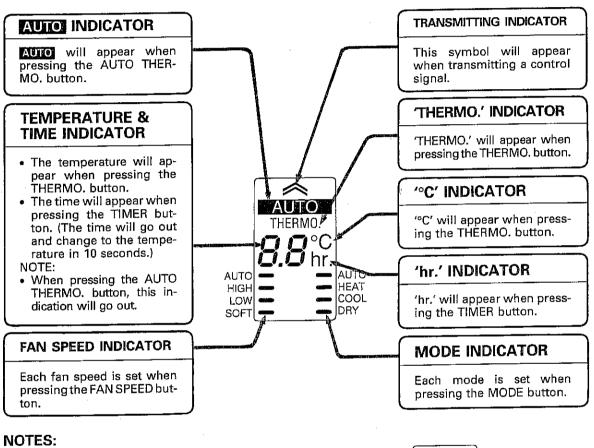


#### WIRELESS REMOTE CONTROLLER

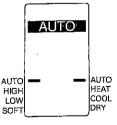


## INDICATORS AND OPERATION

### DISPLAY OF WIRELESS REMOTE CONTROLLER



- (1) When you load the batteries, all indications will indicate to AUTO. (See the figure at right.)
- (2) Even after stopping the unit, the indications on the display will be retained.



#### **CAUTIONS**

- Direct exposure of the receiver to a strong light such as sunlight may interrupt the proper operation. In such event, shut off the light with a curtain or the like.
- Use of a fluorescent lamp with a quick starter in the same room may not let the receiver to correctly receive the remote control signal.
- If there is an electric appliance in the room that operates by a remote controller signal, and if the unit is affected by a signal from such an appliance, contact your dealer.
- Do not place the wireless remote controller under direct sunlight or near a heating element. Note that moisture and shock is not good for the remote controller and the unit. It may result in discoloration, deformation, or machine trouble.
- Smear on the surface of the units should be wiped away with a soft cloth.
- If you do not use the unit for a long time, you should remove the batteries from the remote controller.

## HOW TO USE THE WIRELESS REMOTE CONTROLLER

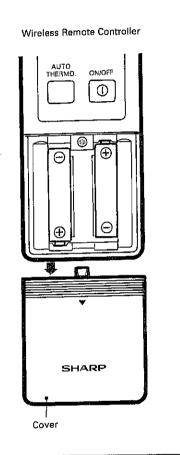
#### HOW TO LOAD BATTERIES

## USE TWO HIGH-PERFORMANCE R03 (AAA) MANGANESE OR ALKALINE BATTERIES.

- 1 Push the cover of the wireless remote controller and slide it in the arrow direction to remove. Load batteries in the compartment correctly referring to the polarity markings inside.
- 2 The wireless remote controller will automatically be reset after loading of the batteries.
- 3 Put back the cover.

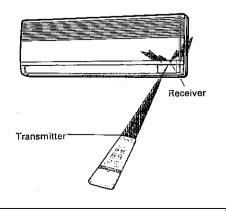
#### **CAUTIONS**

- Life of battery is about 10 months under the normal condition.
  - If the remote controller can not work, the batteries need replacing with new ones.
- Never use any used batteries. Use the same type of battery.
- The batteries must be removed from the remote controller if it is not used for a long time.



### HOW TO USE THE WIRELESS REMOTE CONTROLLER

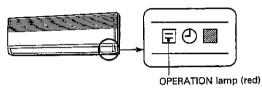
- Direct the remote controller transmitter towards the receiver window and enter choice on the controller. A beep will sound when the choice is properly picked up by the unit.
- The unit would not respond to the control signal if there is an object such as curtain in between the transmitter and the receiver.
- The wireless remote controller works within a redius of 7 meters.



### **AUTOMATIC OPERATION**

#### (When each button is set to AUTO)

In AUTO mode, the microcomputer will select HEAT, COOL or DRY mode in consideration of room temperature at starting. It also sets THERMO. (temperature control) and FAN SPEED automatically. (See Page 8.)



Ensure the power to the air conditioner is turned ON.

Ů

#### **MODE** button

Press the button.

 The indication bar on the display indicates AUTO position.



#### **AUTO THERMO. button**

Press the button.

AUTO will appear on the display.



#### **FAN SPEED button**

Press the button.

 The indication bar on the display indicates AUTO position.



#### ON/OFF button

Press the button to start.

• The OPERATION lamp (red) will light up.



#### Adjusting air flow direction

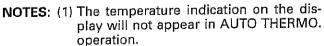
Adjust the louvres to get the desired air flow. (See page 15.)



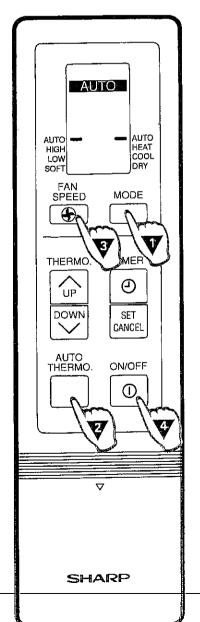
#### STOP ON/OFF button

Press the button once again.

The OPERATION lamp (red) will go out.



(2) Even after stopping the unit, the indications on the display will be retained. (See the figure at left.)



#### WHAT IS AUTOMATIC OPERATION

In AUTO mode, the microcomputer will select HEAT, COOL, or DRY mode in consideration of room temperature at starting. It also sets THERMO. (temperature control) and FAN SPEED automatically.

Room Temp. at starting	AUTOMATIC OPERATION		
	SETTING MODE	SETTING TEMP.	FAN SPEED
below 21°C	HEAT	23°C	
21°C – 26°C	DRY	Room Temp. at starting	SOFT or OFF
26°C – 28°C	COOL	25°C	Change to LOW, and to SOFT as the room tempera-
above 28°C		26°C	ture nears the SETTING TEMP.

**NOTE:** If necessary, THERMO., FAN SPEED or MODE can be changed individually to the desired position.

#### TO CHANGE MODE DURING OPERATION

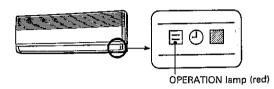
Press each button to change the mode; FAN SPEED, MODE or THERMO..

When you press the THERMO. button during AUTO THERMO. operation, AUTO on the display will go out. The setting temperature and 'THERMO.' will appear.

NOTE:

In DRY mode the fan speed is unchangeable since it is fixed at a suitable speed.

### **HEAT OPERATION**



THERMO. OTUA AUTO HIGH LOW COOL FAN SPEED MODE THERMO. MER (2) UP DOWN SET CANCEL AUTO THERMO. OFF SHARP

Ensure the power to the air conditioner is turned ON.

#### MODE button

Press the button.

 The indication bar on the display indicates HEAT position.

### AUTO THERMO., THERMO. button

Press the AUTO THERMO. button or the THERMO. button to set the temperature to the desired position.

When you press the AUTO THERMO. button, the temperature indication on the display will not appear. (See NOTES below.)

Preferable setting temperature is between 20 and 23 °C.

 In the case of AUTO THERMO., the microcomputer will set to 23°C. (See page 8.)

#### **FAN SPEED button**

Press the button.

 The indication bar on the display indicates AUTO or the desired position.

#### ON/OFF button

Press the button to start.

The OPERATION lamp (red) will light up.

### Adjusting air flow direction

Adjust the louvres to get the desired air flow. (See page 15.)

#### STOP ON/OFF button

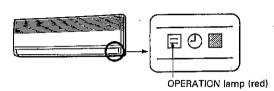
Press the button once again.

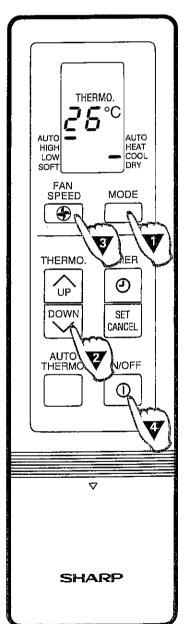
The OPERATION lamp (red) will go out.

NOTES: (1) The temperature indication on the display will not appear in AUTO THERMO. opera-

tion.
(2) Even after stopping the unit, the indications on the display will be retained.
(See the figure at left.)

#### **COOL OPERATION**





Ensure the power to the air conditioner is turned ON.

#### **MODE** button

Press the button.

 The indication bar on the display indicates COOL position.

AUTO THERMO., THERMO. button Press the AUTO THERMO. button or the THERMO. button to set the temperature

to the desired position.

When you press the AUTO THERMO. button, the temperature indication on the display will not appear. (See NOTES below.)

Preferable setting temperature is between 26 and 28 °C.

- In the case of AUTO THERMO., the microcomputer will set either 25°C or 26°C according to the room temperature. (See page 8.)
- If the THERMO. is set below 21°C in COOL mode, the protective device may interrupt the unit.

#### **FAN SPEED button**

Press the button.

 The indication bar on the display indicates AUTO or the desired position.

#### ON/OFF button

Press the button to start.

The OPERATION lamp (red) will light up.

#### Adjusting air flow direction

Adjust the louvres to get the desired air flow. (See page 15.)

#### STOP ON/OFF button

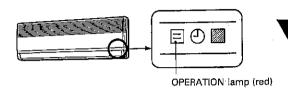
Press the button once again.

• The OPERATION lamp (red) will go out.

NOTES: (1) The temperature indication on the display will not appear in AUTO THERMO. operation.

(2) Even after stopping the unit, the indications on the display will be retained. (See the figure at left.)

#### DRY OPERATION



AUTO AUTO HEAT COOL AUTO HIGH FAN SPEED MODE TIMER THERMO. (-) UΡ DOWN SET CANCEL ON/OFF THÈRMO.

SHARP

Ensure the power to the air conditioner is turned ON.

#### **MODE** button

Press the button.

 The indication bar on the display indicates DRY position, and FAN SPEED and THER-MO. will automatically be set to AUTO position. (See the figure at left.)

#### **ON/OFF** button

Press the button to start.

• The OPERATION lamp (red) will light up.

## Adjusting air flow direction Adjust the louvres to get the desired air

Adjust the louvres to get the desired a flow. (See page 15.)

#### STOP ON/OFF button

Press the button once again.

The OPERATION lamp (red) will go out.

NOTES: (1) This operation is automatically controlled by the microcomputer, and it is impossible to change the setting position of THERMO. and FAN SPEED.

(2) Even after stopping the unit, the indications on the display will be retained. (See the figure at left.)

#### WHAT IS DRY MODE?

In DRY mode, the microcomputer controls the unit to remove humidity without lowering the room temperature.

The unit is controlled on and off automatically.

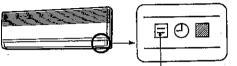
#### When the room temperature comes higher

The operating time is extended to drop the room temperature.

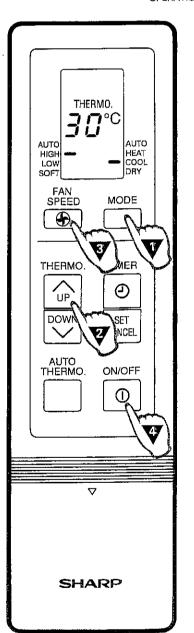
#### When the room temperature comes lower

The operating time is cut short to raise the room temperature.

### **FAN ONLY OPERATION**



OPERATION lamp (red)



Ensure the power to the air conditioner is turned ON.

#### **MODE** button

Press the button to set to COOL.

• The indication bar on the display indicates position.

#### THERMO. button

Press the button to set at 30°C. (See NOTES below and the figure at left.)

#### **FAN SPEED button**

Press the button to set to the desired position.

#### ON/OFF button

Press the button to start.

• The OPERATION lamp (red) will light

#### Adjusting air flow direction

Adjust the louvres to get the desired air flow. (See page 15.)

#### STOP ON/OFF button

Press the button once again.

The OPERATION lamp (red) will go out.

NOTES: (1) If the room temperature is above 30°C, the unit will operate in COOL mode.

(2) Even after stopping the unit, the indications on the display will be retained.

(See the figure at left.)

#### **SETTING THE TIMER**

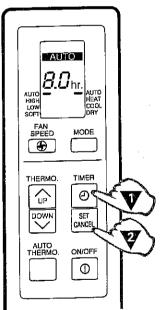
When the unit is not operating.

#### TIMER ON mode (off $\rightarrow$ on)

(Example-1) To get the desired room temperature in eight hours from now. (AUTO THERMO. mode)

1 Press the TIMER button to set time to 8.

Press the SET/CANCEL button.



When the timer has been set, the TIMER lamp (yellow) of the unit will light up.

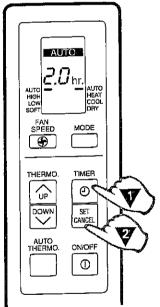
When the unit is operating.

### TIMER OFF mode (on $\rightarrow$ off)

(Example-2) To stop the unit in two hours from now. (AUTO THERMO. mode)

Press the TIMER button to set time to 2.

Press the SET/CANCEL button.



When the timer has been set, the TIMER lamp (yellow) of the unit will light up. In one hour, the system goes into to AUTO SLEEP FUNCTION. (See Page 14.)

NOTES: (1) When you press the TIMER button, 'hr.' indication on the display will be blinking. You can select time while the indication is blinking. (The blinking will stop as you press the SET/CANCEL button.)

(2) The time will automatically go out in 10 seconds after pressing the SET/CANCEL button.

The indication on the display will change to the THERMO. mode.

(3) The TIMER lamp (yellow) is on while the timer is set, so you can judge by the lamp whether the timer is set or not.

### THE AWAKING FUNCTION

Set the TIMER ON mode to get comfortable when getting up or coming home. The unit will start 0-30 minutes earlier than the setting time, so that the room temperature can reach a desired level by the desired time.

### THE AUTO SLEEP FUNCTION

#### WHAT IS THE AUTO SLEEP FUNCTION

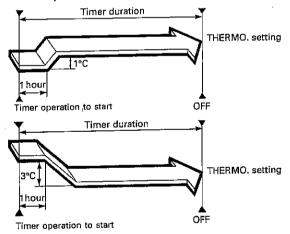
- When TIMER OFF mode has been set active, it automatically goes into the AUTO SLEEP FUNCTION.
- The room temperature is automatically adjusted for healthy and comfortable sleep; it prevents the room from getting too cool in COOL mode, and getting too warm in HEAT mode. Besides it saves power, too.

#### COOL. DRY MODE

In one hour after the timer operation has started, the 'THERMO.' setting is risen 1°C to prevent the room from getting too cool.

#### **HEAT MODE**

In one hour after the timer operation has started, the 'THERMO.' setting is dropped 3°C to prevent the room from getting too warm.



#### TO CANCEL THE TIMER MODE

Press the SET/CANCEL button once again. The TIMER lamp (yellow) of the unit will go out.

#### TO CHANGE THE TIME SETTING

Press the SET/CANCEL button once again, and then set a new time. (See Page 13.)

TO CHANGE FAN SPEED, MODE AND/OR THERMO. AFTER SETTING THE TIMER

If you want to change FAN SPEED, MODE and/or THERMO, after setting the timer, press each button to change them to the desired position.

## ADJUSTING THE AIR FLOW DIRECTION

There are two kinds of louvres; the vertical adjustment louvres used to adjust vertical air flow and the horizontal ones to adjust horizontal air flow.

### **ADJUSTING VERTICAL AIR FLOW**

#### In HEAT mode

Tilt down the vertical adjustment louvres towards the floor as indicated by the marked setting "HEAT range". The air is delivered down to the floor.

#### In COOL and DRY mode

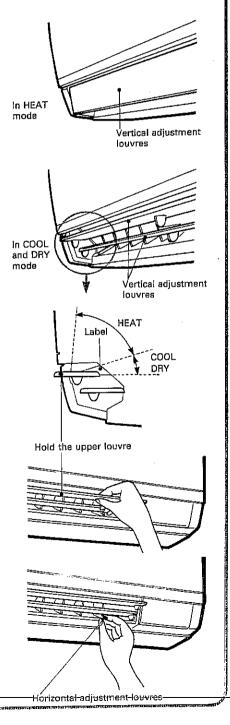
Set the vertical adjustment louvres almost to the horizontal position as indicated by the marked setting "COOL range".

#### NOTES:

- (1) If the unit is operated for a long time with the vertical adjustment louvres tilted down in COOL or DRY mode, there may be a possible falling of dew droplet that formed over the louvre surface.
- (2) When you adjust the vertical adjustment louvres hold the upper louvre. (See the figure at right.)

### ADJUSTING HORIZONTAL AIR FLOW

Adjust the horizontal adjustment louvres to the desired angle. See the figure to tilt the louvres.



### HOW TO OPERATE IN THE AUXILIARY MODE

Use this mode when the wireless remote controller is not available.

ON

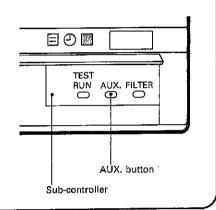
Press the AUX. button.
The OPERATION lamp (red) will light up and the unit will start in AUX. mode.

The microcomputer will select HEAT, COOL or DRY mode according to the room temperature. THERMO. and FAN will be set to AUTO.

OFF

Press the AUX. button once again.
The OPERATION lamp (red) will

go out.



NOTE: If the AUX. button is pressed during normal operation, the unit will stop.

### HOW TO OPERATE IN THE TEST RUN MODE

Use this mode for checking.

Because the system goes into continuous operation mode without thermostat control, please do not use this mode for normal operation.

ON

Press the TEST RUN button.

The OPERATION lamp (red) will blink and the unit will start in COOL mode.

OFF

Press the AUX. button.

The OPERATION lamp (red) will go out.

TEST RUN button

Sub-controller

NOTE: For TEST RUN in HEAT mode, press the mode button of the remote controller to set to HEAT.

## OPERATIONAL POINTS YOU SHOULD KNOW

## NOTES ON AIR CONDITIONER OPERATIONS

The unit may not operate if the ambient temperature is extremely high or low because the protective device works.

Dew will form on the air outlet and may drop to the floor when the unit continuously operates in COOL or DRY mode in an environment of over 80% humidity.

#### **POWER INTERRUPT**

The entire unit stops immediately after a power failure.

To resume the operation after the power is recovered, the ON/OFF button must be pressed.

#### 3-MINUTE PROTECTION

When the STOP button has been pressed, there is a time delay of three minutes before the air conditioner will restart.

#### **FAN SPEED**

- When the FAN SPEED is set to AUTO in COOL mode, the fan speed automatically decreases as the room temperature nears the setting temperature.
- When the room temperature reaches the setting temperature in HEAT mode, the compressor and the fan stop.
- In DRY mode, the fan speed is automatically controlled by the microcomputer.

#### **HEAT OPERATION**

#### PRE-HEATING FUNCTION

- The fan may stop for 2 5 minutes after the unit is turned on.
- This prevents the circulation of cold air before the unit is sufficiently warmed up.

#### **DE-ICE FUNCTION**

- When the heat exchanger of outdoor unit is frosted in HEAT mode, the automatic DE-ICE FUNCTION will work for the effective heating. (for about 2 – 10 minutes)
- In this case, the inside fan and the outside fan will stop.
- After the DE-ICE FUNCTION has worked, the unit goes into HEAT operation automatically.

#### **HEATING EFFICIENCY**

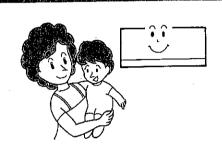
- The unit utilities a heat pump that absorbs heat from outside air and brings it into the room. So outside temperature greatly affects the heating efficiency.
- If low outside temperature prevents efficient heating, supplementary heater will help your heating.
- It takes some time for the unit to warm up and warm the whole room because this unit is a forced air circulation type.
- So you had better make the best of TIMER in HEAT operation.

## MAKING THE MOST EFFICIENT USE OF THE UNIT

#### SAVING ENERGY WITH YOUR ROOM AIR CONDITIONER

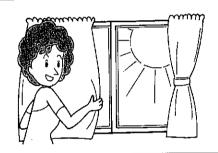
#### SETTING THE PROPER TEMPERATURE

- In COOL mode, keep the difference between the inside and outside temperature within 5°C. A 1°C drop in room temperature will result in an approximate 10% increase in power costs.
- Making the room too cold is not good for your health and results in excess power consumption.



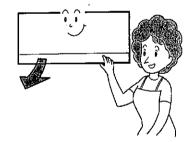
#### **DIRECT SUNLIGHT AND DRAFTS**

- Close blinds and curtains to keep out direct sunlight during cooling operation.
- Close the windows or doors as much as possible during cooling operation.



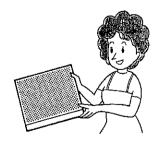
#### SETTING THE PROPER AIR DIRECTION

 Standing or sitting directly in the air flow path is not good for your health.



#### KEEPING THE FILTER CLEAN

Keeping the filter clean greatly aids efficient operation.



#### MAKING THE BEST OF TIMER OPERA-TION

 Use the unit only when necessary. Also, the AUTO SLEEP FUNCTION will help to save energy, so use it as much as possible.



## MAINTENANCE

## CLEANING THE FILTER

#### HINT

When the green FILTER lamp blinks the air filter requires cleaning. But if used in dusty conditions it is recommended to clean more often.

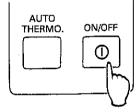
#### 3 CLEANING THE FILTER

Use a vacuum cleaner to clean dust off. If the filter is too dirty, wash it with water and neutral detergent.



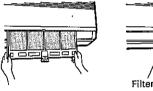
Dry the filter in the shade before fitting.

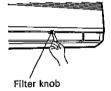
#### 1 STOP THE UNIT.



#### **4** FITTING THE FILTER

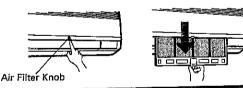
Fit the filter in place. Push the filter knob into the unit.



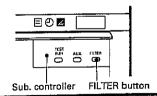


### 2 REMOVING THE FILTER

- 1. Press the knob slightly. The knob will spring out.
- 2. Pull down the air filter down.

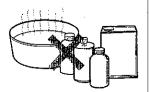


After restarting the unit, press the FILTER BUTTON to turn off the blinking filter lamp.



#### AVOID HOT WATER AND SOL-VENTS.

Do not use hot water, thinners, a-brasive powders, or strong solvents to clean the unit.



## AVOID SPLASHING WITH WATER.

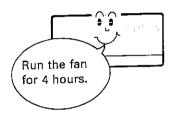
Do not splash water to the unit.
This could result in electrical shock.



#### SEASONAL POST-OPERATION CHECK

## RUN THE FAN FOR HALF A DAY.

Run FAN ONLY OPERATION for about 4 hours to thoroughly dry out the inner mechanisms.

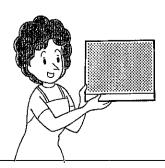


## TURN OFF THE CIRCUIT BREAKER

Stop the air conditioner and turn off the circuit breaker.

#### **CLEANING THE FILTER**

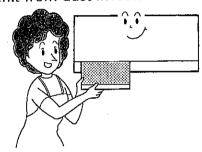
Clean the filter, and fit it in the unit.



#### **SEASONAL INSPECTION**

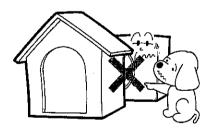
## ALWAYS INSTALL THE FILTER.

If the unit operates without the filter, there is a risk of damaging the unit from dust invasion.



## AVOID BLOCKING THE AIR INLET AND OUTLET.

Blocking the air inlet or outlet may result in poor operation.



## CHECKING THE OUTDOOR UNIT MOUNTING RACK

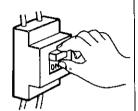
Check the rack for deterioration in its strength.

# POINTS TO KEEP IN MIND WHEN USING YOUR AIR CONDITIONER

## USE 230-240 VOLT POWER CIRCUIT ONLY.

230/240V/50Hz

Using a power circuit with the improper voltage and frequency rating can result in damage to the unit and possibly fire.
Use the circuit with 230-240 volt (±10%) rating.



# WHEN USING THE AIR CONDITIONER FOR INFANTS, CHILDREN, AGED, BEDRIDDEN, AND THE HANDICAPPED.....

Always make sure that the room temperature is suitable for those in the room.



## VENTILATE THE ROOM PERIODICALLY DURING USE.

Ventilate the room periodically during use; especially when using gas appliances.



## DO NOT INSERT OBJECTS INTO THE INLET AND OUTLET.

This could result in possible injury due to the high speed fans.



## ALWAYS USE A FUSE WITH THE PROPER AMP RATING.

Do not, under any circumstances, use wire, pins or other objects in place of the proper fuse. Not only damage to the unit but also a serious safety (hazard may result.

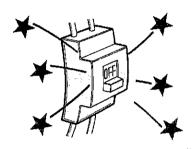


### **BEFORE CALLING FOR SERVICE**

If there is something wrong with your unit, first check the following points before calling for service.

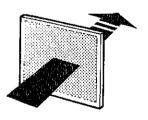
### WHEN THE UNIT FAILS TO OPERATE

Verify if the circuit breaker has tripped or if the fuse has blown.

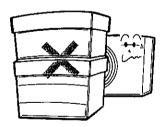


## WHEN THE UNIT FAILS TO COOL OR HEAT THE ROOM PROPERLY

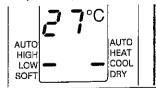
Check the filter and make sure it's not blocked by dirt or dust.



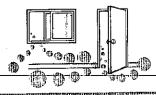
Check the outdoor unit to make sure there is nothing blocking the air inlet or outlet.



Verify whether the temperature control is set properly. If the setting temperature is too high in COOL mode and too low in HEAT mode, the unit may fail to operate properly.



Make sure all windows and doors are closed exactly. The air from the outdoor may prevent the room from getting cool efficiently.



Too many people in the room may cause the temperature not to fall to the desired level.



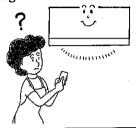
Heat generating appliances in the same room will affect cooling efficiency.



## NORMAL!

#### HOT AIR NOT COME

Hot air will not come from the air outlet in the pre-heating operation or the deicing.



#### **ODOR**

Odors may be emitted from the air conditioner. These are the normal room odors that carpet, furniture etc emit.



#### **UNIT NOISE**

A soft swishing noise may be heard during operation or immediately after stopping. This is the normal sound of the circulating refrigerant.



#### WATER VAPOR

- In COOL and DRY mode, water vapor will sometimes be seen coming from the air outlet due to the temperature difference between room air and the unit's outlet air.
- In HEAT mode, the outdoor fan may stop and water vapor may come from the circumference. The automatic de-ice operation works.

**NOTE**: If the air conditioner will not be used for a long period, turn off the circuit breaker as the microprocessor uses 4 watts in standby mode.

#### **SPECIFICATIONS**

<ul><li>Rated A.C. voltage</li><li>Rated frequency</li><li>Horsepower</li></ul>	230-240V 50 Hz 2 HP
<ul> <li>Cooling Capacity         Watts         B.T.U./h</li> </ul>	5120 17500
<ul> <li>Heating Capacity         Watts         B.T.U./h</li> </ul>	5500 18800

Specifications are subject to change without any obligation on the part of the manufacturer with today's progressive manufacturing.

SHARP CORPORATION OSAKA, JAPAN

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