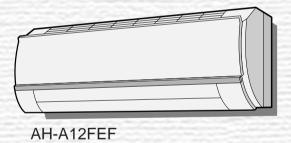
# SHARP



**R22** 





## INDOOR UNIT

**OUTDOOR UNIT** 

AH-A9FEF AH-A12FEF AU-A9FF AU-A12FF



# SPLIT TYPE ROOM AIR CONDITIONER

**OPERATION MANUAL** 

## **CONTENTS**

• SPECIFICATIONS2
• IMPORTANT SAFETY INSTRUCTIONS3
• ADDITIONAL NOTES ON OPERATION5
• TIPS ON SAVING ENERGY5
• PART NAMES6
• USING THE REMOTE CONTROL9
BASIC OPERATION10
• ADJUSTING THE AIR FLOW DIRECTION 11
• TIMER OPERATION12
• TURBO COOLING OPERATION14
• ONE-HOUR OFF TIMER14
AUXILIARY MODE15
• MAINTENANCE16
• BEFORE CALLING FOR SERVICE17

Thank you for purchasing a SHARP air conditioner. Please read this manual carefully before operating the product.

# **SPECIFICATIONS**

Model		AH-A9FEF	AH-A12FEF
Cooling capacity (kJ/h)		9495	12660
Rated freqency (Hz)		60	60
Rated voltage (V)		230	230
Rated current (A)		3.6	4.8
Rated input (W)		825	1100
External dimensions (mm)	Indoor unit	810x270x184	790x280x200
(WxHxD)	Outdoor unit	730x540x250	
Weight (kg)	Indoor unit	8	10
vveignit (ng)	Outdoor unit	28	31

We reserve the right to change the materials and apecifications without notice.

## **IMPORTANT SAFETY INSTRUCTIONS**

## WARNINGS FOR USE

- 1 Do not pull or deform the power supply cord. Pulling and misuse of the power supply cord can result in damage to the unit and cause electrical shock.
- **2** Be careful not to expose your body directly to the outlet air for a long time. It may affect your physical conditions.
- When using the air conditioner for infants, children, elderly, bedridden, or disabled people make sure the room temperature is suitable for those in the room.
- A Never insert objects into the unit. Inserting objects can result in injury due to the high speed rotation of internal fans.
- **5** Ground the air conditioner without fail. Do not connect the grounding wire to gas pipe, water pipe, lightning rod or telephone grounding wire. Incomplete grounding may cause electric shock.
- 6 If anything is abnormal with the air conditioner (ex. a burning smell), stop the operation immediately and turn the circuit breaker OFF.
- The appliance shall be installed in accordance with national wiring regulations. Improper cable connection can cause the power supply cord, plug and the electrical outlet to overheat and cause fire.
- 8 If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard. Use only the manufacture-specified power cord for replacement.

### WARNINGS FOR INSTALLATION / REMOVAL / REPAIR

 Do not attempt to install/remove/repair the unit by yourself. Incorrect work will cause electric shock, water leak, fire etc. Consult your dealer or other qualified service personnel for the installation/removal/repair of the unit.

# **IMPORTANT SAFETY INSTRUCTIONS**

## CAUTIONS FOR USE

- 1 Open a window or door periodically to ventilate the room, especially when using gas appliances. Insufficient ventilation may cause oxygen shortage.
- 2 Do not operate the buttons with wet hand. It may cause electric shock.
- **3** For safety, turn the circuit breaker off when not using the unit for an extended period of time.
- 4 Check the outdoor unit mounting rack periodically for wear and to make sure it is firmly in place.
- Do not put anything on the outdoor unit nor step on it. The object or the person may fall down or drop, causing injury.
- This unit is designed for residential use. Do not use for other applications such as in a kennel or greenhouse to raise animals or grow plants.
- 7 Do not place a vessel with water on the unit. If water penetrates into the unit, electrical insulations may deteriorate and cause electric shock.
- **8** Do not block the air inlets nor outlets of the unit. It may cause insufficient performance or troubles.
- **9** Be sure to stop the operation and turn the circuit breaker off before performing any maintenance or cleaning. A fan is rotating inside the unit and you may get injured.
- 10 Do not splash or pour water directly on the unit. Water can cause electrical shock or equipment damage.
- This appliance is not intended for use by young children or infirm persons without supervision.
  - Young children should be supervised to ensure that they do not play with the appliance.

## CAUTIONS FOR LOCATION / INSTALLATION

- Make sure to connect the air conditioner to power supply of the rated voltage and frequency.
  - Use of a power supply with improper voltage and frequency can result in equipment damage and possible fire.
- Do not install the unit in a place where inflammable gas may leak. It may cause fire. Install the unit in a place with minimal dust, fumes and moisture in the air.
- Arrange the drain hose to ensure smooth drainage. Insufficient drainage may cause wetting
  of the room, furniture etc.
- Make sure a leak breaker or a circuit breaker is installed, depending on the installation location, to avoid electrical shock.

# **ADDITIONAL NOTES ON OPERATION**

#### **OPERATING TEMPERATURE RANGE**

		INDOOR TEMP.	OUTDOOR TEMP.
COOLING	upper limit lower limit	32°C D.B. 23°C W.B.	43°C D.B.
OOOLING		21°C D.B. 15°C W.B.	21°C D.B.

D.B. = Dry-bulb W.B. = Wet-bulb

- The built-in protective device may prevent the unit from operating when used out of this range.
- Condensation may form on the air outlet if the unit operates continuously in the COOL or DRY mode when humidity is over 80 percent.

#### WHEN POWER FAILURE OCCURS

The air conditioner will stay off even when power is restored.

After power is restored, press the ON/OFF button once more.

If the timers were set before a power failure, they will need to be re-set after power is restored.

## TIPS ON SAVING ENERGY

Below are some simple ways to save energy when you use your air conditioner.

#### SET THE CORRECT TEMPERATURE

- Setting the thermostat 1°C higher than the desired temperature in the COOL mode will save approximately 10 percent in power consumption.
- Setting the temperature lower than necessary during cooling operation will result in increased power consumption.

#### **BLOCK DIRECT SUNLIGHT AND PREVENT DRAFTS**

- Blocking direct sunlight during cooling operation will reduce power consumption.
- Close the windows and doors during cooling operation.

# SET PROPER AIR FLOW DIRECTION TO OBTAIN THE BEST AIR CIRCULATION

KEEP FILTER CLEAN TO ENSURE THE MOST EFFICIENT OPERATION

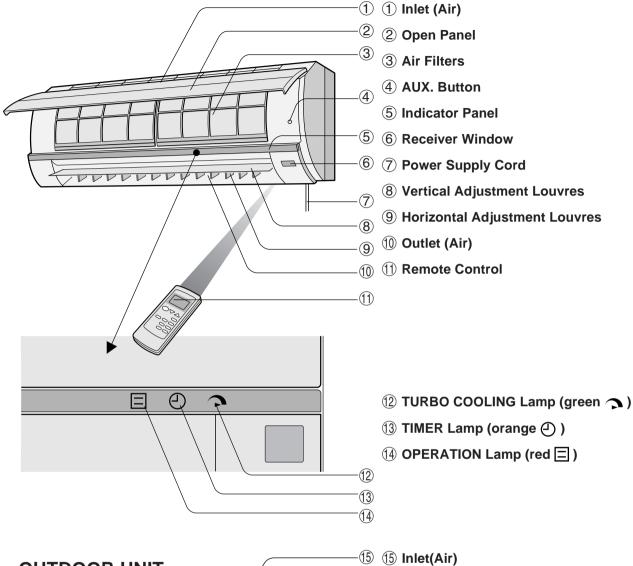
MAKE MOST OF THE TIMER OFF FUNCTION

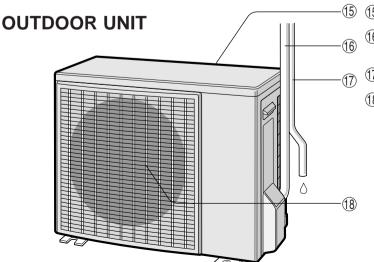
# DISCONNECT THE POWER CORD OR TURN OFF THE CIRCUIT BREAKER WHEN THE UNIT IS NOT USED FOR AN EXTENDED PERIOD OF TIME

The indoor unit still consumes a small amount of power when it is not operating.

# **PART NAMES**





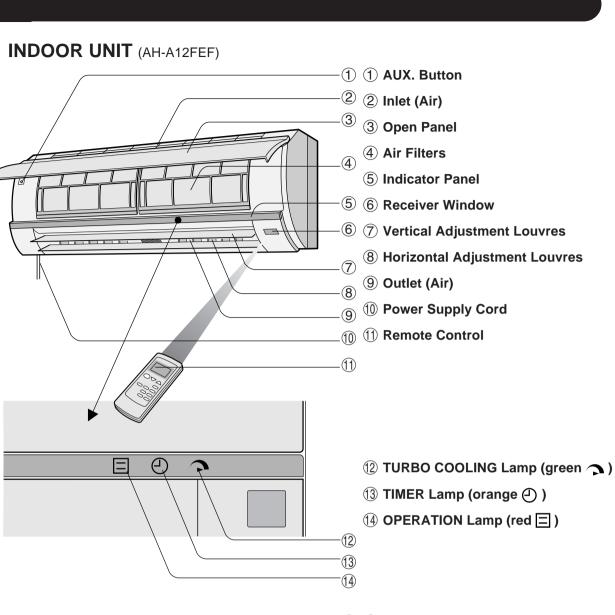


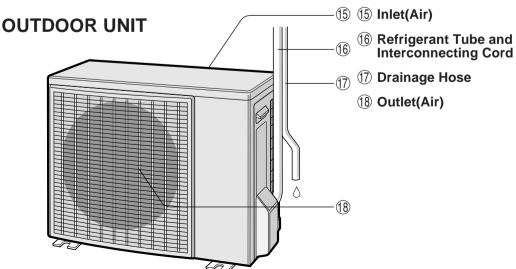
(6) Refrigerant Tube and Interconnecting Cord

**17** Drainage Hose

18 Outlet(Air)

NOTE: Actual units might vary slightly from those shown above.

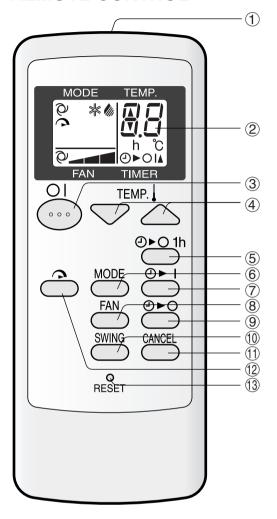




NOTE: Actual units might vary slightly from those shown above.

# **PART NAMES**

### REMOTE CONTROL



- 1 TRANSMITTER
- 2 DISPLAY (Liquid Crystal Display)
- ③ ON/OFF Button
- 4 TEMP. Button
- **(5) ONE-HOUR OFF TIMER Button**
- **6 MODE Button**
- (7) TIMER ON Button (for setting the timer)
- **8 FAN Button**
- (9) TIMER OFF Button (for setting the timer)
- 10 SWING Button
- (1) TIMER CANCEL Button
- 12 TURBO COOLING Button
- **13 RESET Button**

### L.C.D. REMOTE CONTROL DISPLAY

**14) MODE SYMBOLS** 

OTUA: 🏈

COOL :



- **15 TURBO COOLING SYMBOL**
- **16 FAN SPEED SYMBOLS**

AUTO :

: Manu

: Manual setting



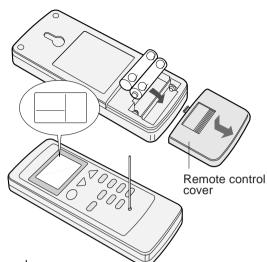
- **18 TRANSMITTING SYMBOL**
- (19) TIMER ON/TIMER OFF INDICATOR Indicates when timer on or timer off is set.



# **USING THE REMOTE CONTROL**

## LOADING BATTERIES Use two size-AAA (R03) batteries.

- 1 Remove the battery cover at the back of the remote control.
- 2 Insert batteries in the compartment, making sure the  $\bigoplus$  and  $\bigoplus$  polarities are correctly aligned.
  - Lines will be indicated on the display when batteries are properly installed.
- **3** Reinstall the battery cover.
- **4** Press the RESET button using a thin stick.



#### NOTES:

- The battery life is approximately one year in normal use.
- When you replace the batteries, always change both batteries, and make sure they are the same type.
- If the remote control does not operate properly after replacing the batteries, press the RESET button using a thin stick.
- If you will not be using the unit for a long time, remove the batteries from the remote control.

## HOW TO USE THE REMOTE CONTROL

Point the remote control towards the unit's signal receiver window and press the desired button. The unit generates a beep when it receives the signal.

- Make sure there is no curtain or other object between the remote control and the unit.
- The remote control can send signals from up to 7 metres away.

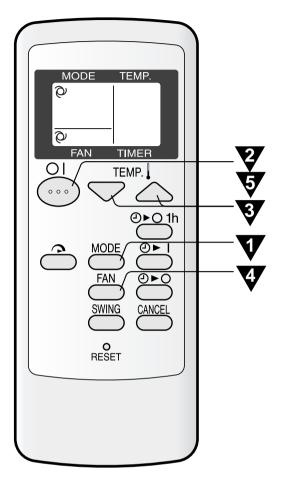




## CAUTION

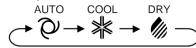
- Do not allow the signal receiver window to receive strong direct sunlight, since it can adversely
  affect its operation. If the signal receiver window is exposed to direct sunlight, close a curtain to
  block the light.
- Using a fluorescent lamp with a quick starter in the same room may interfere with transmission of the signal.
- The unit can be affected by signals transmitted from the remote control of a television, VCR or other equipment used in the same room.
- Do not leave the remote control in direct sunlight or near a heater. Also, protect the unit and remote control from moisture and shock which can discolour or damage them.

# **BASIC OPERATION**





Press the MODE button to select the operation mode.





Press the ON/OFF button to start operation.

• The red OPERATION lamp (□) on the unit will light.



Press the TEMP. button to set the desired temperature.

### **AUTO/DRY MODE**

The temperature can be changed in 1°C increments within the range of 2°C higher to 2°C lower from the temperature automatically determined by the air conditioner.



### **COOL MODE**

The temperature can be set within the range of 18 to 32°C.





Press the FAN button to set the desired fan speed.

AUTO SOFT LOW

HIGH



 In the DRY mode, the fan speed is preset to AUTO and cannot be changed.



To turn off the unit, press the ON/OFF button again.

 The red OPERATION lamp (□) on the unit will turn off.

## TIPS ABOUT AUTO MODE-

In the AUTO mode, the temperature setting and mode are automatically selected according to the room temperature when the unit is turned on.

## **Modes and Temperature Settings**

Room temp. at operation start-up	Automatic Operation		
start-up	Mode	Temperature Setting	
Below 24°C	DRY	Room Temp. at start-up	
24°C-26°C	COOL	24°C	
26°C-28°C	COOL	25°C	
Above 28°C	COOL	26°C	

# **ADJUSTING THE AIR FLOW DIRECTION**

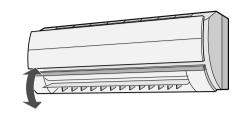
## VERTICAL AIR FLOW DIRECTION

Press the SWING button on the remote control once.

 The vertical adjustment louvre will change its angle continuously.

Press the SWING button again when the vertical adjustment louvre is at the desired position.

- The louvre will stop moving within the range shown in the diagram.
- The adjusted position will be memorized and will be automatically set to the same position when operated the next time.



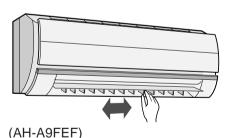
### Adjustment range

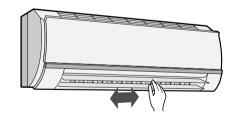


The adjustment range is narrower the SWING range in order to prevent condensation from dripping.

## HORIZONTAL AIR FLOW DIRECTION

Hold the horizontal adjustment louvre as shown in the diagram and adjust the air flow direction.





(AH-A12FEF)



## **CAUTION**

Never attempt to adjust the vertical adjustment louvres manually.

- Manual adjustment of the vertical adjustment louvre can cause the unit to malfunction when the remote control is used for adjustment.
- When the vertical adjustment louvre is positioned at the lowest position in the COOL or DRY mode for an extended period of time, condensation may result.

Do not adjust the horizontal adjustment louvre to the extreme left or right in the COOL mode with the fan speed set to "SOFT( — )" for an extended period of time. Condensation may form on the louvres.

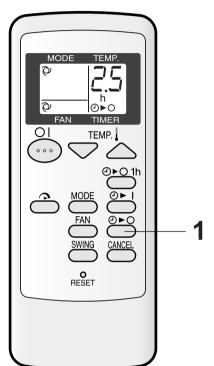
# **TIMER OPERATION**

### **TIMER OFF**

The unit will turn off automatically according to your setting.

Timer duration can be set from a minimum of half an hour (30 minutes) to a maximum of 12 hours.

Up to 9.5 hours, you can set in half-hour (30-minute) increments, and from 10 to 12 hours, in 1-hour increments.



Display shown when you set the unit to turn off 2.5 hours later.

Point the remote control at the signal receiver window on the unit

- **1** Press the TIMER OFF ( ♠ ) button and set time as desired.
  - The time setting will change as you press the button as follows,

Hold the button down to speed through the settings.

- The orange TIMER lamp ( ♠ ) on the unit will light.
- The unit will generate a beep when it receives the signal.
- The time setting will count down to show the remaining time.

#### TIPS ABOUT TIMER OFF OPERATION

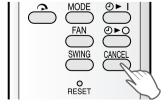
When the TIMER OFF is set, the temperature setting is automatically adjusted to prevent the room from becoming excessively cold while you sleep. (Auto Sleep function)

 One hour after the timer operation begins, the temperature setting rises 1°C higher than the original temperature setting.

#### TO CANCEL TIMER

Press the CANCEL button.

 The orange TIMER lamp (♠) on the unit will turn off.



#### TO CHANGE TIMER SETTING

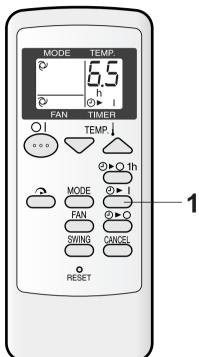
Press the TIMER button which you wish to change, (TIMER OFF or TIMER ON) and change the time setting.

## TIMER ON

The unit will turn on automatically according to your setting.

Timer duration can be set from a minimum of half an hour (30 minutes) to a maximum of 12 hours.

Up to 9.5 hours, you can set in half-hour (30-minute) increments, and from 10 to 12 hours, in 1-hour increments.



Display shown when you set the unit to reach the desired room temperature 6.5 houres later

Point the remote control at the signal reciever window on the unit.

1 Press the TIMER ON ( ♠ I ) button.

• The time setting will change as you press the button as follows.

Hold the button down to speed through the settings.

The orange TIMER lamp ( ② ) on the unit will light.

 The unit will generate a beep when it receives the signal.

• The time setting will count down to show the remaining time.

Select the mode, temperature and fan speed setting as desired.

 When the temperature is set with the TIMER ON, the temperature will show in the display for 5 seconds and then return to the time display.

 If you do not change the setting, the unit will operate using the most recent setting.

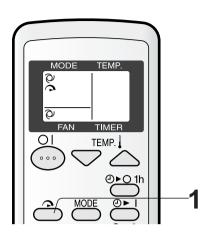
 The unit will turn on prior to the set time to allow the room to reach the desired temperature by the programmed time. (Awaking function)

#### NOTES ON TIMER SETTING AND OPERATION

- The latest time setting will be memorized and will appear on the remote control display the next time you set the TIMER OFF or TIMER ON.
- The TIMER OFF and TIMER ON can not be set together.
   Only the most recent TIMER setting will be valid.
- While the ONE-HOUR OFF TIMER is set, the TIMER OFF and TIMER ON setting are unavailable.
- If the ONE-HOUR OFF TIMER is set while the TIMER OFF or TIMER ON is activated, the TIMER ON or TIMER OFF setting will be cancelled.

## TURBO COOLING OPERATION

In this operation, the air conditioner fan works at "extra high" speed with a setting temperature of 15°C to rapidly cool the room.



- 1 Press the TURBO COOLING button during operation.
  - The remote control will display " \( \square\) ".
  - The temperature display will go off.
  - The green TURBO COOLING lamp ( ) on the unit will light up.

### TO CANCEL

Press the TURBO COOLING button again.

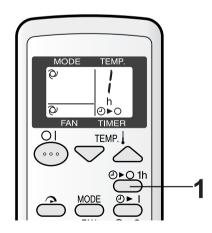
- TURBO COOLING operation will also be cancelled when the operation mode is changed, or when the unit is turned off.
- The green TURBO COOLING lamp ( ) on the unit will turn off.

#### NOTES:

- You cannot set the temperature or fan speed during the TURBO COOLING operation.
- The fan and temperature settings become "HIGH" speed and 18°C after the unit has run for 30 minutes in TURBO COOLING operation.

## **ONE-HOUR OFF TIMER**

When the ONE-HOUR OFF TIMER is set, the unit will automatically turn off after one hour.



- 1 Press the ONE-HOUR OFF TIMER button.
  - The remote control will display " th ⊕ ► O ".
  - The orange TIMER lamp ( ) on the unit will light
  - The unit will stop operating after one hour.

### TO CANCEL

Press the CANCEL button.

The orange TIMER lamp ( ♠) on the unit will turn off.

Alternatively, turn the unit off by pressing the ON/OFF button.

• The red OPERATION lamp ( □ ) and the orange TIMER lamp ( つ ) on the unit will turn off.

#### NOTES:

- The ONE-HOUR OFF TIMER operation has priority over TIMER ON and TIMER OFF operations.
- If the ONE-HOUR OFF TIMER is set while the unit is not operating, the unit will operate for an hour at the formerly set condition.
- If you wish to operate the unit for another hour before the ONE-HOUR OFF TIMER is activated, press the ONE-HOUR OFF TIMER button again during operation.

# **AUXILIARY MODE**

Use this mode when the remote control is not available.

### TO TURN ON

Lift the front panel of the indoor unit and press the AUX. button on the operation panel.

- The red OPERATION lamp ( □ ) on the unit will light and the unit will start operating in the AUTO mode.
- The fan speed and temperature setting are set to AUTO.

## **TO TURN OFF**

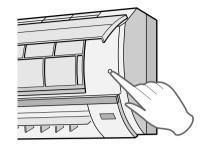
Press the AUX. button on the operation panel again.

 The red OPERATION lamp (□) on the unit will turn off.

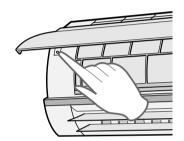
### NOTE:

If the AUX. button is pressed during normal operation, the unit will turn off.

#### (AH-A9FEF)



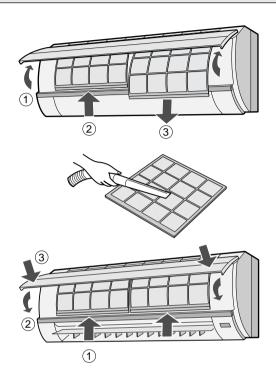
(AH-A12FEF)



# **MAINTENANCE**

Be sure to disconnect the power cord from the wall outlet or turn off the circuit breaker before performing any maintenance.

## **CLEANING THE FILTERS** The air filters should be cleaned every two weeks.



- 1 TURN OFF THE UNIT
- **2** REMOVE THE FILTERS
  - 1 Lift the open panel.
  - Push the air filters up slightly to unlock them.
  - 3 Pull the air filters down to remove them.
- 3 CLEAN THE FILTERS

Use a vacuum cleaner to remove dust. If the filters are dirty, wash them with warm water and a mild detergent. Dry filters in the shade before reinstalling.

- 4 REINSTALL THE FILTERS
  - 1 Reinstall the filters in the original positions.
  - 2 Close the open panel.
  - 3 Push the arrow-marked points shown left firmly to lock it in place.

## **CLEANING THE UNIT AND THE REMOTE CONTROL**

- Wipe them with a soft cloth.
- Do not directly splash or pour water on them, or it can cause electrical shock or equipment damage.
- Do not use hot water, thinner, abrasive powders or strong solvents.

# MAINTENANCE AFTER AIR CONDITIONER SEASON

- 1 Operate the unit in the COOL mode, temperature setting 32°C, for about half a day to allow the mechanism to thoroughly dry.
- 2 Stop the operation and unplug the unit. Turn off the circuit breaker, if you have one exclusively for the air conditioner.
- **3** Clean the filters, then reinstall them.

# MAINTENANCE BEFORE AIR CONDITIONER SEASON

- 1 Make sure that the air filters are not dirty.
- **2** Make sure that nothing obstructs the air inlet or outlet.
- 3 Check the outdoor mounting rack periodically for wear and to make sure it is firmly in place.

## **BEFORE CALLING FOR SERVICE**

### The following conditions do not denote equipment malfunctions

### **UNIT DOES NOT OPERATE**

The unit will not operate if it is turned on immediately after it is turned off. The unit will not operate immediately after the mode is changed. This is to protect the internal mechanisms. Wait 3 minutes before operating the unit.

#### **ODORS**

Carpet and furniture odors that entered into the unit and the air conditioner's inner component odors at the early stage of installation may be sent out from the unit.

#### **CRACKING NOISE**

The unit may produce a cracking noise. This sound is generated by the friction of the front panel and other components expanding or connecting due to a temperature change.

#### SWISHING NOISE

The soft, swishing noise is the sound of the refrigerant flowing inside the unit.

#### **WATER VAPOUR**

In the COOL and DRY operation, water vapour can sometimes be seen at the air outlet due to the difference between the room air temperature and the air discharged by the unit.

If the unit appears to be malfunctioning, check the following points before calling for service.

#### IF THE UNIT FAILS TO OPERATE

Check to see if the circuit breaker has tripped or the fuse has blown.

IF THE UNIT FAILS TO COOL THE ROOM EFFECTIVELY				
Check the filters. If dirty, clean them.	Check the outdoor unit to make sure nothing is blocking the air inlet or outlet.	Check the thermostat is proper setting.		
Make sure windows and doors are closed tightly.	A large number of people in the room can prevent the unit from achieving the desired temperature.	Check whether any heat- generating appliances are operating in the room.		

IF THE UNIT FAILS TO RECEIVE THE REMOTE CONTROL SIGNAL			
Check whether the remote control batteries have become old and weak.	Try to send the signal again with the remote control pointed properly towards the unit's signal receiver window.	Check whether the remote control batteries are installed with the polarities properly aligned.	

Please call for service when OPERATION Lamp and TIMER Lamp on the indicator panel blink.

