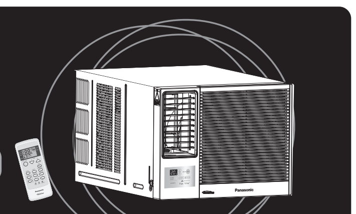
Panasonic



ENGLISH

OPERATING INSTRUCTIONS

ROOM AIR CONDITIONER

CW-SUL70BA
CW-SUL90BA

ACXF55-40770

A2L WARNING	This symbol shows that this equipment uses a mildly flammable refrigerant. If the refrigerant is leaked, together with an external ignition source,there is a possibility of ignition.
CAUTION	This symbol shows that the Operating Instructions should be read carefully.
CAUTION	This symbol shows that service personnel should be handling this equipment with reference to the Technical Manual.
CAUTION	This symbol shows that there is information included in the Operating Instructions and/or Technical Manual.

Before operating the unit, read these operating instructions thoroughly and keep them for future reference.

1 SAFETY PRECAUTIONS

Please observe these following safety precautions when using your air conditioner.
Failure or negligence in observing these safety precautions could cause fire, electrical shock or personal injury.

WARNING	This sign warns of risk of death or serious injury.	This symbol denotes an action that is PROHIBITED.
CAUTION	This sign warns of risk of injury or damage to property.	These symbols denote actions that are COMPULSORY.

INSTALLATION PRECAUTION

WARNING

- Do not install, remove and reinstall the unit yourself.
  Improper installation may cause Leakage, electric shock or fire. Please engage an authorized dealer or professionally trained technician for the installation work.
- Do not add or replace refrigerant other than the specified type.
  It may cause product damage, burst and injury. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similar qualified persons in order to avoid hazard.
- The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater)
- In cases that require mechanical ventilation, ventilation openings shall be kept clear of obstruction.
- Ventilate any enclosed areas when installing or testing the refrigeration system.
  Escaped refrigerant gas, on contact with fire or heat, can produce dangerously toxic gas.
- Confirm after installation that no refrigerant gas is leaking. If the gas comes in contact with a burning stove, gas water heater, electric room heater or other heat source, it can cause the generation of toxic gas.

CAUTION

The room air conditioner must be earthed.
- Improper grounding could cause electric shock.

Do not install the unit in a place where there are explosive gas leaks.
- Gas leaks near the unit could cause fire.

Ensure that the drainage piping is connected properly.
- Otherwise water will leak out.

A2L Risk of fire / Flammable materials

OPERATION PRECAUTION

WARNING This sign warns of risk of death or serious injury.

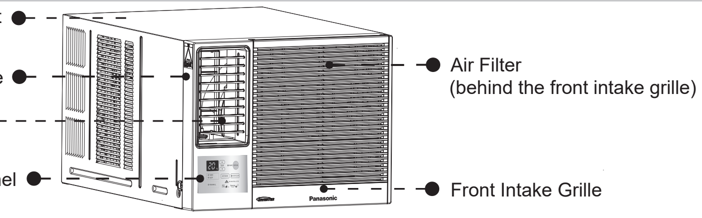
- Do not modify the length of power cord or use an extension cord.
- Do not touch or operate with wet hands.
- Do not modify or damage the cord.
- Do not turn on the unit by inserting the power plug.
- Do not switch off the unit by pulling out the power plug.
- Avoid an extended period of direct airflow.
- Do not Insert your fingers or other objects into the unit, rotating parts may cause injury.
- Do not try to repair the unit yourself.
- Plug in properly before operating and use a specified power cord.
- If abnormal conditions (burnt smell, etc.) occur, switch off and disconnect the power plug.
- Confirm to authorized dealer or specialist on usage of specified refrigerant type. Using of refrigerant other than the specified may cause product damage, burst and injury etc.
- This appliance is not Intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

CAUTION This sign warns of risk of injury or damage to property.

- Do not use the unit for other purposes, than its intended use.
- Do not disconnect the power plug by pulling the cord.
- Do not block the air intake and outlet vanes.
- Do not splash or direct water at the unit.
- Do not expose the unit to direct sunlight during operation.
- Do not operate the unit without the air filter installed or when the front intake grille has been removed.
- Do not place any objects on the unit.
- Do not operate any combustion equipment near the unit's air flow area.
- Do not sit or step on the unit, you may fall down accidentally.
- Do not touch the sharp aluminium fin, sharp parts may cause injury.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by manufacturer.
- Switch off the breaker (or remove the power plug) if the unit will not be operated for a long period.
- Pay attention to any damages on the unit caused by extensive usage.
- Ventilate the room occasionally where the unit is installed.
- Always turn off the air conditioner and the main power supply (remove the power plug) before cleaning the unit.

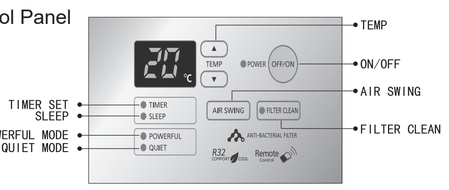
2 PARTS IDENTIFICATION

MAIN UNIT



Vertical airflow direction vane (Airflow direction adjustment up-down). The vertical airflow direction vane is controlled by positioning the vent to discharge the air upwards, downwards, or straight out.

Touch Control Panel



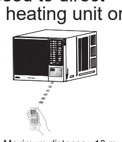
- When the filter cleaning light flashes or brightens, it is recommended to clean the filter after dismantling.Filter cleaning light will flash about 20 seconds, if didn't press the "MAIN UNIT RESET", it will keep brighten after flashes about 20 second.
- After the filter is cleaned, please lightly press the"Reset" button on the remote control or touch the FILTER CLEAN button on the control panel, and the unit will beep once (the model filter cleaning light goes out).
- When the machine has been running for 500 hours, the filter cleaning light will flash for about 20 seconds and then go out after the machine is turned on and off. If it is not reset to restart the timer, after the machine is turned on for 800 hours, the filter cleaning light will flash for about 20 seconds and then stay on.

TYPES OF SIGNAL SOUND - One long "BEEP" and one short "BEEP" . (Sound from the main unit.)

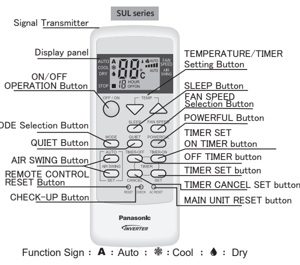
ACCESSORIES

- **Remote control** • **Two R03 dry-cell batteries** • **Drain pan**

Be sure to observe the following:
- Aim remote control at control panel on air conditioner when operating.
- Do not drop or throw the remote control.
- Do not place the remote control in a location that is exposed to direct sunlight or next to a heating unit or other heat Sources.



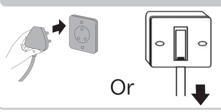
• Maximum distance : 10 m



Function Sign : A : Auto ; ❄ : Cool ; ♦ : Dry

3 PREPARATION BEFORE OPERATING

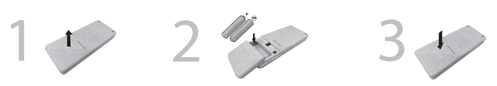
⚠ WARNING



Ensure that the power plug (power cord) is securely inserted.
A loose power cord may cause a fire or an electric shock.

NOTES:
- If the unit is not going to be used for an extended period of time, remove the power plug (switch off the breaker). Otherwise, approximately 2.5W of electricity will be used even if the unit has been turned off using the remote control.
- If operation is stopped, and is to be restarted immediately, the unit will resume operation only after 3 minutes.

HOW TO INSERT BATTERIES



Open the cover. Insert the two batteries. Close the cover.

⚠ CAUTION

Do not use rechargeable (Ni-Cd) batteries because such batteries differ from the standard dry cell batteries in shape, dimensions and performance.

ABOUT THE BATTERIES

- The batteries can be used for approximately one year.
- Be sure to replace the batteries with two new identical batteries.
- Remove the batteries if the air conditioner will not be used for an extended period of time.

OPERATION CONDITIONS
Use the air conditioner under the following conditions:

(unit in °C)

	Indoor side		Outdoor side	
	D.B.T.	W.B.T.	D.B.T.	W.B.T.
Max. Temperature	32	23	43	26
Min. Temperature	16	11	16	11

NOTE: Humidity may exceed 90%
D.B.T.: Dry Bulb Temperature
W.B.T.: Wet Bulb Temperature

- Operating temperature range.

Continuous operation at over 90% high humidity may create condensation and result in waterdrops on the intake and outlet vanes.

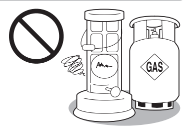
■Avoid installation in the following locations.
- Mechanical processing plants and other places with a lot of mechanical oil.
- High humidity areas such as laundry room and bathroom.

■Air conditioner COOLING normal operating temperature.
- Indoor maximum temperature 30 ℃, lowest temperature 16 ℃
- Outdoor maximum temperature 43 ℃, lowest temperature 16 ℃

■NOTICE:
When the air conditioner is used at room temperature of 21 degrees or less, the temperature may be too low, and the air conditioner may be easily frosted. After frosting, it may be difficult to drain and may flow into the room.

4 AIR CONDITIONER INSTALLATION

CHOOSING THE INSTALLATION LOCATION

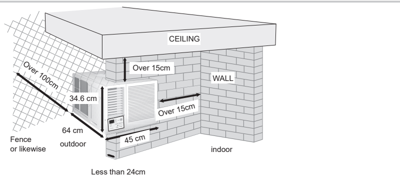


- When installing, use the nearest power device. Make sure the power device is easy to reach so you can quickly disconnect your air conditioner in case of emergency.
- Ensure that the air conditioner is well supported, securely fastened, easily reachable and not obstructed.
- Avoid location with: salty or sulphurous air, draughts, dampness and flammable gas.
- If you install the drainage system, be sure to channel the condensed water to a suitable location.
- Covers, obstructions and unsteady support may cause excessive operating noise and vibration.
- The rear end of the air conditioner is splash proof. You don't need to shield or cover it.
- R32 refrigerant air conditioner installation and maintenance should be done by competent person.

PREPARATIONS BEFORE INSTALLATION

Dimension
- There should not be any obstacles surrounding the unit.
- Prepare the installation hole slightly bigger than the cabinet size.
- Left and right side of the unit should be at least 15 cm away from the wall.
- The minimum installation height is 75cm.

(Based on IEC 60335-2-40, there is no restriction for the minimum installation floor area since the refrigerant charges is less than 1.842kg.)

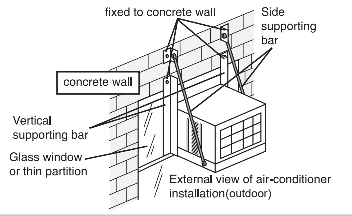


CAUTION POINT DURING INSTALLATION

When installing air conditioner at glass window or thin partition, fix the vertical and side supporting bar to the concrete wall in order to support the weight of the air-conditioner and reduce the vibration that is being transferred to the glass window or thin partition.

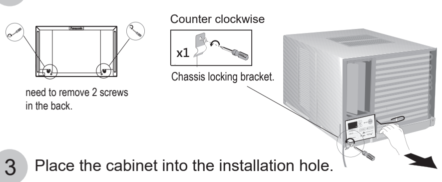
This can minimize the noise problem caused by improper installation.

- Proposed to use 1/8" x 1-1/4" "angle-aluminium for installation frame and side supporting bar.

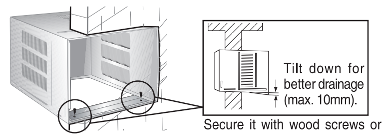


INSTALLATION PROCEDURES

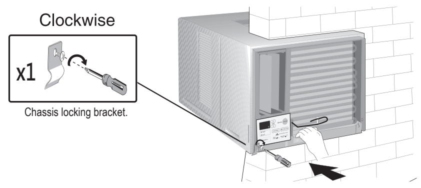
1. Remove the chassis locking bracket from the cabinet. Save for later use.
2. Slide the chassis out from the cabinet



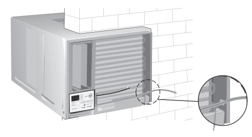
3. Place the cabinet into the installation hole.



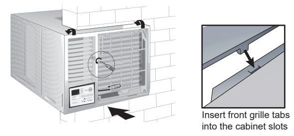
4. Slide the chassis into the cabinet.
5. Lock the chassis to the cabinet reusing the chassis locking bracket.



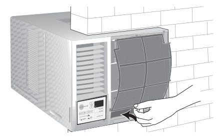
6. Depending upon the location of AC outlet, route the AC cord to either left or right side before Installing the front grille.



7. Attach the front grille to the cabinet and fasten it with screw.



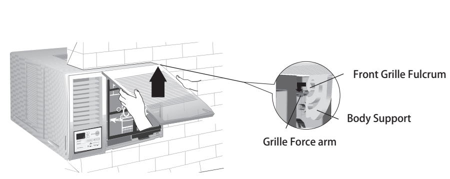
8. Attach air filter to the front grille. (see anti-bacterial filter installation instructions included in this package)



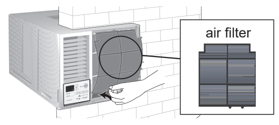
9. Press down intake grille.

REMOVAL OF FRONT GRILLE

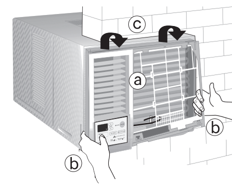
1. Open the Intake Grille until over 90° front grille fulcrum can remove from Grille force arm.



2. Remove the air filter.
   Tilt up and pull out the air filter by the holder.



3. Remove the front grille.
   a. Remove the screws on the front grille.
   b. Put your hands on the lower left corner and lower right corner of the front grill, and pull front grill out toward you. Do not pull the bottom edge towards to you for more than 3 inches to prevent the two top tabs from damage.
   c. Slide the front grille upwards to loosen the two top tabs from slots at the top of the cabinet.



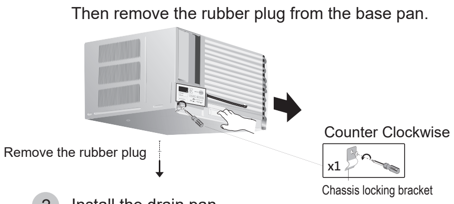
ELECTRIC WORK

- Always use at the rated voltage and with a specific air conditioning circuit.
- This equipment must be earthed and strongly recommended to be installed with Earth Leakage Circuit Breaker (ELCB) or Residual Current Device (RCD). Otherwise, it may cause electric shock or fire in case of malfunction.
- A 16 Ampere time delay fuse or circuit breaker is required.
- Nominal cross sectional area of power supply wire must be 3 core x 2.5 mm^2 or above.
- The power supply must be from an independent circuit.
- All electrical installations must be made in accordance with local wiring and safety regulation wherever applicable.
- There must be a double pole switch with a minimum of 3.5 mm contact gap in the fixed installation circuit.
- Please engage and authorized dealer or specialist for the installation work.

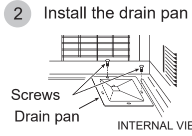
CONDENSED WATER DRAINAGE

SUL series
This is a "INVERTER COOLING" model,The design of spraying condensate water on the condenser achieve the best cooling effect. This method is called "throwing system". If the sound of spraying makes you annoyed, you can use the following methods for outdoor drainage, but the performance will be slightly reduced.

1. First remove the front grille, secondly remove the chassis locking bracket/s from the cabinet and slide the chassis out from the cabinet. Then remove the rubber plug from the base pan.



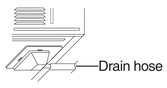
2. Install the drain pan



Install the drain pan at the right corner of the cabinet using 2 screws.

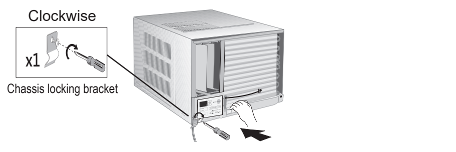
3. Connect a drain hose. Fit the drain hose to the drain pan.

Underside view with drain pan and hose in place.

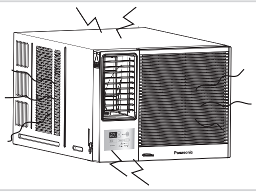


NOTE: Drain hose or tubing can be purchased locally to satisfy your particular needs.

4. Slide the chassis back into the cabinet. Lock the chassis to the cabinet reusing the chassis locking bracket. Then reinstall the Front Grill to the Cabinet.



NOISE CONSIDERATION



- Select an installation location that can support the weight of the air conditioner and one that will not cause increased operating noise and vibration.
- Ensure that when installed, airflow and noise from the rear side of the unit (outdoor) do not disturb neighboring elements.
- Obstacles placed in front of the air outlet on the rear side of the unit (outdoor), or covers placed over it will cause excessive noise and deterioration in performance.

TRANSFERRING

- Repositioning or transfer of the air conditioner due to renovation or moving requires an additional service charge. Please consult your dealer before moving.

5 AIR CONDITIONER OPERATION

OPERATING THE UNIT

OFF/ON

Start operation by pressing OPERATION.
The operation will turn on and the display panel will light up.
To stop the operation, press the OPERATION again.
The unit will stop operating and the display panel will turn off.

SETTING DISPLAY TEMPERATURE

TEMP

Display will change according to the setting.

Press TEMP/TIMER▲or▼to set the display temperature.
The temperature can be set between 16°C and 30°C.
Recommended temperature: 26°C~28°C
NOTES:

●The latest set temperature will be stored and displayed when the air-con is ON.

Display will change according to the setting.

SELECTING OPERATION MODE

SUL series

MODE

AUTO
COOL
DRY

Press MODE to select the desired operation.
(A “beep” sound will indicate changing setting)
AUTO mode
Air conditioners are automatically operated according to indoor and outdoor temperatures.
COOL mode
To set room temperature to your preference of cooling comfort.
DRY mode
DRY mode unit operates at low fan speed to give a gentle cooling operation.

SELECTING FAN SPEED

FAN SPEED

AUTO

Press FAN SPEED selection button to choose fan speed level of the fan.
(A “beep” sound will indicate changing setting)

If air conditioner automatically selects COOL or DRY mode and the fan speed is at AUTO speed, it will operate the “Self-cleaning” function to clear the dust on Heat exchanger,(Defer air flow for 40 seconds or intermittently operate)

ADJUSTING HORIZONTAL AIRFLOW DIRECTION

AUTO
AIR SWING
SET

Press AIR SWING button to select air swing direction angle.
(A “beep” sound will indicate changing setting)

Press the upper button to adjust left and right airflow direction.
Press the lower button to stop AIR SWING.

POWERFUL OPERATION

POWERFUL

POWERFUL
QUIET

To reduce the temperature quickly under cool mode:

Press POWERFUL button, after powerful is selected, the operation will go on for 4 hours, after that it will shift back to previous operation mode.

If you want to cancel this operation, press powerful button once more.

SETTING THE OFF TIMER

TIMER-OFF

SET

When the air conditioner is ON:
Press the TIMER-OFF button to set the timer.
Press the same button until the preferred hour of operation is reached.
(The TIMER indicator light will blink to await for setting)
Press TIMER SET button to complete the setting. At this time, the TIMER indicator light is steady instead of blinking.

NOTE:
it is unavailable to set ON TIMER and OFF TIMER simultaneously.
The timer figure will change according to the time remaining.

QUIET OPERATION

QUIET

POWERFUL
QUIET

In order to make the air conditioner quieter :
Press QUIET button.
If you want to cancel this operation, press QUIET button once more.

SETTING THE ON TIMER

TIMER-ON

SET

When the air conditioner is OFF:

Press the TIMER-ON button to set the timer.
Press the same button until the preferred hour before operation is reached.
(The TIMER indicator light will blink to await for setting)
Press TIMER SET button to complete the setting. At this time, the TIMER indicator light is steady instead of blinking.

NOTE:
it is unavailable to set ON TIMER and OFF TIMER simultaneously.
The timer figure will change according to the time remaining.

CANCEL OFF TIMER SETTING

CANCEL

TIMER
SLEEP

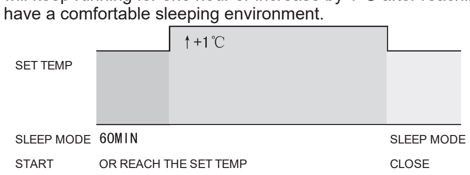
Press the CANCEL button to cancel the timer setting. The TIMER indicator light will turn off.
However the temperature remains displayed.

SLEEP(Cooling mode)

SLEEP

SLEEP

●This setting enables the human body to enter sleep and automatically adjust the temperature to achieve sleep comfort and energy-efficient operation.
●When the sleep button is pressed (or touch control panel sleep light on), the air conditioner enters the sleep mode schedule. Press it again to cancel the sleep schedule.
●After sleep is activated, the SLEEP LED is on, and pressing it again will cancel the sleep mode (SLEEP LED is dim).
●SLEEP mode is released when the machine is turned off.
Note: During sleep operation, in order to avoid over-cooling and over-heating, the temperature, air volume and wind direction Will not follow the remote control settings and will be adjusted automatically.
If the user needs cannot be met, the temperature or air volume can be reset.
◆After the body enters the sleep state, the body temperature drops so in the sleep mode, the air conditioner will keep running for one hour or increase by 1°C after reaching the set temperature, so that people have a comfortable sleeping environment.



6 HELPFUL INFORMATION & ENERGY SAVING HINTS

HELPFUL INFORMATION

Auto Restart Control
- Operation will automatically resume under the previous operation mode.
- If the unit was set to TIMER mode or SLEEP mode, operation will not resume automatically.

Timer Setting
- When power failure occurs, the timer setting is cancelled. Once power returns, reset timer.

ENERGY SAVING HINTS

- Clean the air filter every 2 weeks. Regular cleaning of the air filter preserves efficiency.
- Keeping ventilation set to close keeps cool air in and hot air out.
- Avoid direct sunlight and heat.
- For health reason do not overcool your room.
- Your air conditioner’s cooling capacity should match your room size.

7 CARE AND MAINTENANCE

WARNING Always turn off the air conditioner and the main power supply (remove the power plug) before cleaning the unit.
Switch off the power supply if the unit is not going to be used for a long period of time.

- Clean the cabinet, front grille with mild soap or detergent and lukewarm water.
- The front intake grille can be easily removed for cleaning purposes (refer to Remove the front intake grille procedures). Gently wash it with water and a sponge.
- The filter can be easily cleaned using a vacuum cleaner. Vacuum the front of the filter and then wash the rear with water. If it is badly soiled, wash with a mild household detergent.
- Do not clean with benzene, thinner, scouring powder or cloth soaked in caustic chemicals.
- If the unit is extremely dirty, heat transfer is less efficient and the unit may not cool effectively. Contact Shun Hing Electric Service Centre Ltd. for an annual check. (Annual check is not covered by the warranty.)
- If the air filter becomes clogged with dust, the cooling capacity will drop, and 6% of the electricity used to operate the air conditioner will be wasted.

NOTE: Do not dry the front panel or the air filter in direct sunlight.
(Exposure to direct sunlight may discolour or deform the panel.)

PRE-SEASON INSPECTION

Is the discharged air cold?
After 15 minutes of operation, it is normal for the temperature difference between intake and outlet air to be more than 8°C for cooling.
Are the air intake and outlet vanes of the indoor and outdoor side obstructed?
Are the remote control batteries weak?
The temperature difference between the blower outlet and the suction temperature under the normal state of the machine : cooling 8℃ or above,is a normal phenomenon.

RECOMMENDED INSPECTION

Usage over several seasons will reduce performance as the unit becomes dirty. A dirty unit may produce foul odours and dust may clog the dehumidifying drainage. Seasonal inspection is recommended in addition to regular cleaning. Consult Shun Hing Electric Service Centre Ltd.,

BEFORE CALLING FOR SERVICE

BEFORE Check the following points before calling for repairs or service.
If the malfunction persists, please contact Shun Hing Electric Service Centre Ltd.,

Condition 1 If the unit is too noisy during operation.

The following sounds are normal during operation:
- A low humming sound indicating that the unit is operating.
- A soft clicking sound when the compressor turns on and off.
- A flowing sound due to circulation of the refrigerant when the compressor is turned on.
- A splashing sound indicating condensation in the condenser coil.If you hear other noises, please consult Shun Hing Electric Service Centre Ltd.,

Condition 2 If the unit does not operate.

- The main power cord is not plugged in.
- The main circuit breaker has tripped.
- Remote control batteries are weak.

Condition 3 If the unit does not cool properly.

- The room is too big for the unit’s capacity.
- The air circulation is impeded by curtains or furniture.
- After 15 minutes of operation, it is normal for the temperature difference between intake and outlet air to be more than 8°C for cooling.

Information for Users on Collection and Disposal of Old Equipment and used Batteries
[Information on Disposal in other Countries outside the European Union] These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal. Note for the battery symbol (bottom two symbol examples): This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

NOTE:
1. The enclosure opposing the outdoor is splash proof (IPX4).
2. Do not install this appliance in a laundry room or other locations where water may drip from the ceiling, etc.
3. If the supply cord is damaged or need to be replaced, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.

Condition 4 If water drips off the rear of the unit.

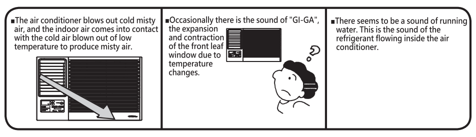
- Humidity is high.
- Condensed water is overflowing.
- To rectify the problem, mount an optional drain pan to the unit.

Condition 5 If water drips inside the room.

- The unit is tilted inward. To rectify this, tilt the unit slightly outward.
- Mount the optional drain pan if you prefer.
- The drain pan may be blocked.

Condition 6

- Squeaking noise during operation,
- Squeaking noise after shutting down
  (This is due to the expansion or contraction of the pipes due to temperature changes)



When to call Shun Hing Electric Service Centre Ltd.
IMMEDIATELY Turn off the power and contact
Shun Hing Electric Service Centre Ltd.
as soon as any of the following events occur.

- The circuit breaker frequently trips or the fuse blows regularly.
- If water or foreign objects have accidentally entered the air conditioner.
- If there is abnormal sound during operation.

Panasonic Corporation
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