

WALL-MOUNTED TYPE AIR CONDITIONERS
(MONOSPLIT INVERTER , AIR-TO-AIR, HEAT PUMP TYPE)

USER'S MANUAL

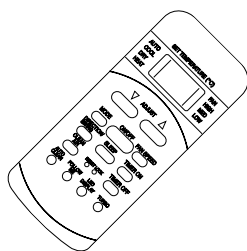
Monosplit HIGH COP Inverter 2010

HKEI - HCKI 275 XS

HKEI - HCKI 365 XS

HKEI - HCKI 515 XS

HKEI - HCKI 685 XS



HOKKAIDO

WARNING:

PLEASE READ CAREFULLY THIS MANUAL BEFORE OPERATING YOUR NEW AIR CONDITIONER.



TERMAL S.R.L. Via della Salute, 14 -- 40132 -- Bologna -- ITALY

EN EUROPEAN REGULATIONS CONFORMITY FOR THE MODELS:

Indoor Units: **HKEI 275 XS, HKEI 365 XS, HKEI 515 XS, HKEI 685 XS**

Outdoor Units: **HCKI 275 XS, HCKI 365 XS, HCKI 515 XS, HCKI 685 XS**

CE

All the products are in conformity with the following European provision:

- Low Voltage Directive 73/23/EEC
- Low Voltage Directive 2006/95/EC
- Electromagnetic Compatibility 89/336/EEC
- Electromagnetic Compatibility 2004/108/EC

ROHS

The products are fulfilled with the requirements in the directive 2002/95/EEC of the European parliament and of the council on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (EU RoHS Directive)

WEEE

In accordance with the directive 2002/96/CE of the European parliament, herewith we inform the consumer about the disposal requirements of the electrical and electronic products.

DISPOSAL REQUIREMENTS:



Your air conditioning product is marked with this symbol. This means that electrical and electronic products shall not be mixed with unsorted household waste. Do not try to dismantle the system yourself: the dismantling of the air conditioning system, treatment of the refrigerant, of oil and of other part must be done by a qualified installer in accordance with relevant local and national legislation. Air conditioners must be

treated at a specialized treatment facility for re-use, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health. Please contact the installer or local authority for more information. Battery must be removed from the remote controller and disposed of separately in accordance with relevant local and national legislation.

President
Giorgio Giatti

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GENERAL INFORMATION

Outline of specific features

ECO-FRIENDLY REFRIGERANT R410A

As R410A refrigerant contains no chlorine, it does not damage ozone.

POWER CONTROL THROUGH "DC INVERTER"

Power is supplied according to real needs of comfort, thus permitting a sure energy saving.

INFRARED REMOTE CONTROLLER

All available functions of the air conditioner can be set by using the infrared remote controller, whose LCD panel immediately shows the operating parameters.

ON TIMER / OFF TIMER

ON Timer, allows to program the air conditioner's start within 24 hours. If the set time does not exceed 10 hours, the TIMER ON is set by 0.5 hours' steps. If the set time exceeds 10 hours, the TIMER ON is set by 1 hour's steps.

OFF Timer, allows to program the air conditioner's stop within 24 hours. If the set time does not exceed 10 hours, the TIMER OFF is set by 0.5 hours' steps. If the set time exceeds 10 hours, the TIMER OFF is set by 1 hour's steps.

The air conditioner's start and/or stop may also be programmed in sequence, within 24 hours.

DRY FUNCTION

When "DRY" function is selected, the air conditioner strongly reduces humidity inside the room, and also keeps the room temperature at a constant value.

ADVANCED CONTROL FOR INDOOR UNIT'S FAN

Thermostatic stops. In Heating mode, when set temperature has been reached inside the room, the compressor stops and the indoor fan speed is lowered to avoid cold drafts.

Hot Keep. At the beginning of operation in Heating mode, the indoor fan will start only 5 minutes later, i.e. when the temperature of indoor heat exchanger is adequate.

MICROCOMPUTER CONTROLLED DEFROSTING FUNCTION (HEATING MODE)

The microcomputer on printed circuit board can monitor all decreases in heating power of the air conditioner caused by frosting on outdoor heat exchanger, and inputs the signal for automatic defrosting; a LED lights up when this function is activated.

THERMOSTAT UNDER MICROCOMPUTER CONTROL

The thermostat being controlled by microcomputer allows remarkable energy saving and provides more comfort, as the room temperature is checked with the greatest precision.

GENERAL INFORMATION

INDOOR FAN AUTOMATIC SPEED CONTROL

The airflow from the Indoor Unit can be controlled step by step, on the basis of the difference between the room temperature and the set temperature. This allows to reduce the lapse of time needed to reach the desired temperature both in Cooling and Heating mode, by treating the appropriate air volumes.

MOTORIZED LOUVERS FOR AIRFLOW DIRECTION

The flaps can be controlled directly by the remote controller so as to reach your desired position.

- By pressing "DIRECTION/SWING" button, you can select your desired angle for vertical airflow louver and make the flaps move up and down continuously, thus increasing air circulation inside the room.

DIAGNOSTIC & PROTECTIVE FUNCTIONS

Shown by codified flashing of LED indicators on the Indoor Unit, they allow to diagnose in a quite precise way the main malfunctions which may concern the air conditioner.

3-minutes' delay protection: there is a protective control of the Outdoor Unit, to prevent compressor's damages after stops. This control is effective in case of malfunction, power failure, turning off the system, etc. and it does not allow Outdoor Unit to restart before 3 minutes have elapsed since the Unit stopped. During this time, Indoor Unit cannot run.

AUTORESTART AFTER A POWER FAILURE

- When a power failure occurs during operation, the air conditioner immediately stops.
- When power is restored, "OPERATION" lamp starts blinking. In particular, the air conditioner will automatically restart after 3 minutes have elapsed since power is restored. This means that it is not required to press "ON/OFF" button on the remote controller. The settings will be the same as before the blackout.

"AUTO CLEAN" FUNCTION

In COOL or DRY mode, press "AUTO CLEAN" button on remote controller to select self-clean operation of air conditioner.

"CLEAN AIR" FUNCTION

Air quality is the key to comfort: this air conditioner is equipped with Ionizer device. Ionizer can generate abundant anions to fill the room with refreshing and nature air. Your whole family will enjoy a natural, pure and healthy air everyday.

"FOLLOW ME" FUNCTION

The remote control serves as a remote thermostat allowing for the precise temperature control at its location.

"SLEEP" FUNCTION

This function allows to save electricity through the gradual increase (in Cooling mode) or the gradual decrease (in Heating mode) of set temperature.

"TURBO" FUNCTION

This function enables the Unit to reach the preset temperature in the shortest time.

SAFETY PRECAUTIONS

Before starting the air conditioner, please read carefully the information in this "USER'S MANUAL". The User's Manual contains very important suggestions related to installation, operation and maintenance of the air conditioner and concerning your personal safety.

The Manufacturer accept no responsibility for the damages that may arise due to non-observance of the instructions listed in this "USER'S MANUAL".

Disposal of an old air conditioner

Before disposing an old air conditioner, please make sure it is inoperative and carry out the disposal by adopting all safety precautions. Unplug it from the power line in order to avoid risks of electric shock.

Please remember that an air conditioner contains refrigerant fluid, requiring specialized waste disposal.

The valuable materials contained in the air conditioner can be recycled. Contact your local Waste Disposal Center for adequate disposal or contact your Dealer for any question.

Please make sure that piping of your air conditioner does not get damaged before being picked up by the relevant Waste Disposal Center. You can contribute to the protection of the environment by adopting an appropriate anti-pollution method of disposal.

Disposal of the packaging of your new air conditioner

All the packaging materials used in the package of your new air conditioner can be disposed without any danger for the environment.

The cardboard may be broken or cut into small pieces and given to a Waste Paper Disposal Service. The wrapping bag made of polyethylene and the polyethylene foam pads contain no fluorochloric hydrocarbon.

All these valuable materials may be taken to a Waste Collecting Center and used again after adequate recycling.

Consult your local Authorities for the name and address of the Waste Materials Collecting Centers and Waste Paper Disposal Services nearest to your house.

General warnings for safety

- Do not operate damaged air conditioners. In case of doubt, contact your Dealer.
- Use of air conditioner must be carried out in strict compliance with the instructions listed further on.
- Do not damage any parts of the air conditioner that carry refrigerant by piercing or perforating the piping with sharp or pointed objects, by crushing or twisting the tubes or scraping off the surfaces' coatings. If the refrigerant spurts out and gets into eyes, this may result in serious injuries.
- Do not obstruct or cover the ventilation grille of the air conditioner. Do not put fingers nor insert objects into the inlet/outlet vent or into the motorized louver.
- Do not allow children to play with the air conditioner. Children should be never allowed to sit on the Outdoor Unit.
- The appliance is not intended for children and disabled people. They must not operate the air conditioner without supervision.
- Electrical works must be carried out according to the local laws. If the power cable is damaged, it must be replaced by the Manufacturer or by qualified Personnel. Size of power cables and connecting wires must be adequate to the characteristics of the air conditioner (current values and power input values).
- If fuses on the PCB are blown, they must be replaced with new fuses of the same type and size.
- After installation, power plug should be properly disposed.
- Exhausted batteries (infrared remote controller) should be properly disposed.
- Always remember to unplug the air conditioner before opening the inlet grille. Never try to unplug the air conditioner by pulling off the power cable. Always grip the power plug firmly and pull it straight out of the power socket.

SAFETY PRECAUTIONS

- **Strictly observe the instructions provided in this Manual.**
- **The air conditioning system contains inside its refrigerant circuit the R410A gas under pressure. Never disconnect refrigerant pipes or connection joints.**
- **Never perform any handling on Outdoor Unit service valves or on Indoor Unit's unions.**
- **Keep this Manual in a safe place easy to reach at any time for convenient reference.**
- **In case the air conditioner is transferred and reinstalled, this User's Manual should always be attached to the appliance.**

SAFETY INSTRUCTIONS

- Please read carefully the following Safety Instructions before operating the air conditioner.
- A strict observance of the instructions indicated in this "USER'S MANUAL" will prevent personal hurt and incidents to the User. Moreover, correct operation and long life of the system will be ensured.
- Depending on the seriousness of potential risks and damages, the reported Instructions are classified in two types: "WARNING" and "CAUTION". A strict observance of the Instructions is required to guarantee your personal safety and the safety of the environments where the Units are installed.
- The following Instructions are related to the air conditioner's installation. They have been reported in this "USER'S MANUAL" just to allow the User to check that installation has been properly carried out. If an improper installation - not corresponding to the Instructions - is verified, please contact the Dealer or the Authorized Technical Service.

The User must never attempt to repair, install or perform special maintenance by himself.

Key to symbols



WARNING

This symbol points out the risk of serious injury or death.



CAUTION

This symbol points out the risk of injury or damage to the property.



Prohibition. Action or procedure not allowed, with serious effects on objects and people.






Obligation. Compulsory action or procedure. The missed observance could bring serious effects on objects and people.






SAFETY PRECAUTIONS



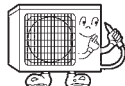

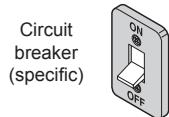

Installation

Never try to install this Unit by yourself, i.e. without the support of Technical Personnel. Never try to repair the Unit by yourself. The Unit's components can be reached only by opening or removing the covering panels, and this involves exposure to high voltage. Even by disconnecting power supply, it is not always possible to avoid the risk of electric shocks.

 WARNING	
<ul style="list-style-type: none"> • Please always contact the Dealer or the Authorized Service Center for installation. Never attempt to install the air conditioner by yourself, because improper installation could cause electric shock, injuries, water leakage or fire. 	
<ul style="list-style-type: none"> • Please always contact the Dealer or the Authorized Service Center for any servicing operation or special maintenance. Never try to repair or carry out special maintenance by yourself. Improper repair or maintenance could cause electric shock, injuries, water leakage or fire. 	








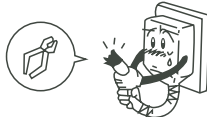

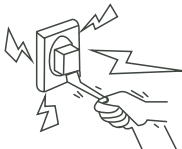

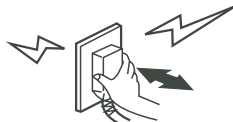

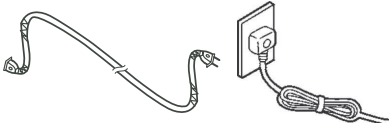





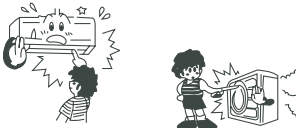

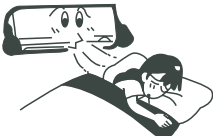



Please confirm that installation has been carried out according to the following prescriptions:

 CAUTION	
<ul style="list-style-type: none"> • When installing, all possible countermeasures must be taken to avoid refrigerant leaks. If there is a high concentration of refrigerant gas in the room, oxygen lack may occur. 	
<ul style="list-style-type: none"> • Do not install the air conditioner near burners, heat sources or flammable gas. This is to avoid the risk of malfunctioning, fire or explosion. 	
<ul style="list-style-type: none"> • Ensure that a circuit breaker has been installed on the power supply line of the air conditioner, to avoid the risk of electric shocks. 	
<ul style="list-style-type: none"> • When installing in a small room, countermeasures should be taken in case of a refrigerant leak exceeds the proper range. Otherwise, it will cause asphyxia. 	

 CAUTION	
<ul style="list-style-type: none"> • Ensure that drain hose and drain pipe installation has been carried out correctly. Incorrect installation or maintenance will cause water leakage. 	
<ul style="list-style-type: none"> • Ensure that Indoor and Outdoor Units have been properly grounded. Defective grounding could cause electric shock. 	 
<ul style="list-style-type: none"> • This kind of appliance needs a specific circuit breaker with proper protective devices against overcurrents and short circuits (fuses or automatic switches). 	 

SAFETY PRECAUTIONS

Always observe the operating precautions listed in the following tables. In this way, correct operation and safeguard of people, animals and objects inside the air-conditioned room will be ensured.

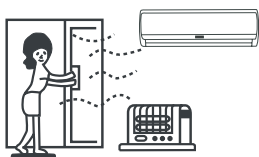
 WARNING	
<p>Use the correct voltage and frequency for power supply.</p> <p>220~230V, 50Hz</p>  	<p>Do not insert the air conditioner's plug into multiple sockets or into sockets to which other appliances are connected. Do not use plug adapters.</p>  
<p>Fully insert the plug into the power socket and make sure the connection is secure and without play. Otherwise, sparks and fire may occur.</p>  	<p>Do not put heavy objects on the power supply cord. Take care not to damage it. Do not use supply cords which are faulty or damaged.</p>  
<p>Do not pull the plug out of the power socket by drawing the power cord. Damaging to the power cord, to the plug or to the socket may occur, and this could result in electric shock or fire generation..</p>  	<p>Never turn off the air conditioner by pulling the power supply plug out of the socket. This could cause electric shock or fire. Always press the "ON/OFF" button on remote controller.</p>  
<p>Do not use extension cords. Do not use rolled power supply cords.</p>  	<p>Never touch switches, sockets or power supply plugs with wet hands. This could cause electric shock.</p>  
<p>If you smell something burning, immediately turn off the air conditioner, switch the circuit breaker to "OFF" or "0", and contact the Authorized Technical Service.</p>  	<p>Do not insert any objects into the air inlet or outlet of Indoor and Outdoor Units. Even if fans are stopped, they could automatically start all at once.</p>  
<p>You should avoid to expose your body directly to cool air for a long time. This may cause health problems to you.</p>  	<p>Do not direct the airflows towards infants, aged or disabled people.</p>  

SAFETY PRECAUTIONS

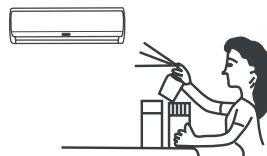


CAUTION

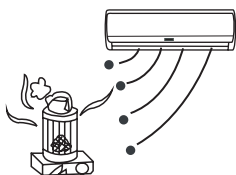
Ventilation should be operated when using at the same time the air conditioner and gas burners. Insufficient ventilation may cause lack of oxygen.



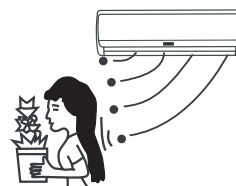
Do not use sprayers near the air conditioner and do not spray anything towards the appliance.



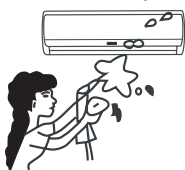
Do not place burners near the airflow of air conditioner.



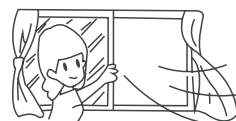
Do not expose plants or animals to the direct airflow of the air conditioner.



To avoid the risk of electric shock, do not sprinkle water nor other liquid on Indoor Unit. Do not clean the air conditioner by water spurts.



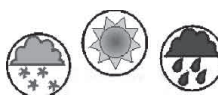
Ventilate the room regularly while the air conditioner is operating. Fail to follow this advice could result in lack of oxygen inside the room.



Do not expose food, plants, animals, precision devices or works of art to the direct airflow of the air conditioner.



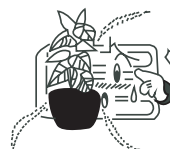
For proper performance, operate the air conditioner under the recommended temperature and humidity range. If the Unit operates beyond these conditions, malfunctions may occur or dew may drip out of the Indoor Unit.



When necessary, replace fuses with new ones of the same type and size. Never use a piece of iron or copper instead of the proper fuse, as it could result in a malfunction or in a fire accident.



Do not place anything in front of the air conditioner nor obstruct the air outlet.



Do not put any object on the air conditioner. On the appliance's upper part there is an air grille that must not be obstructed. Besides, a heavy object may cause the air conditioner's fall.

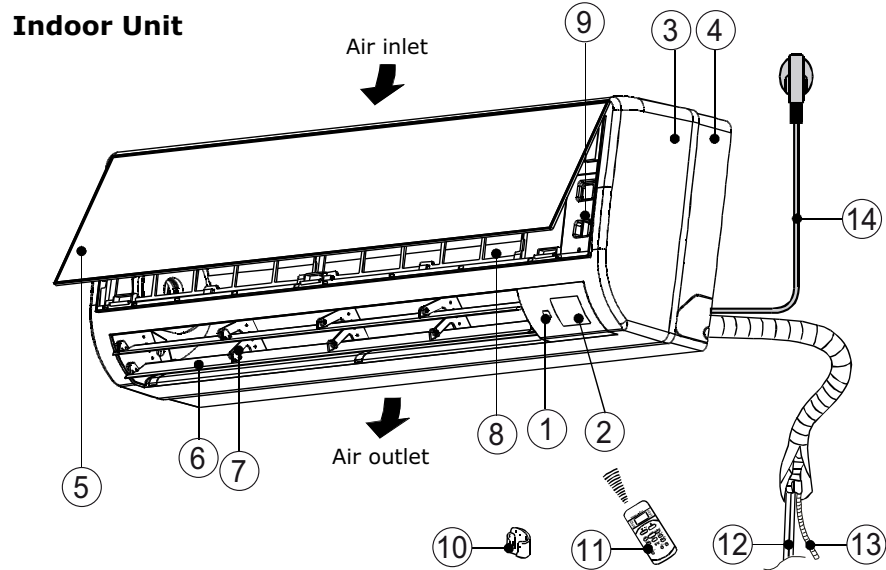


Do not touch the heat exchangers' metal fins on Indoor and Outdoor Units. This could cause hurts due to the sharp shape of the fins. Take care of this especially when removing the air inlet panel and the air filters.

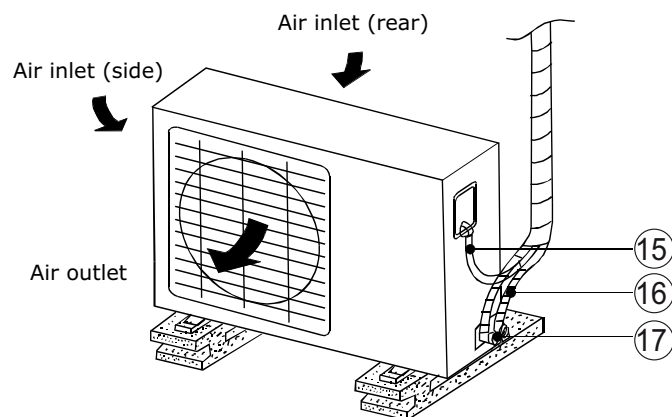


INDOOR AND OUTDOOR'S UNITS OUTLINE

The figure below is for explanation purpose only. The real appearance of the components could be rather different.



Outdoor Unit



Indoor Unit

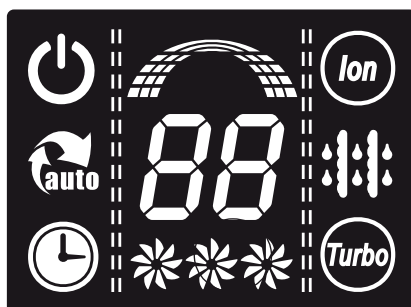
1. Signal receiver
2. LCD Display window
3. Panel frame
4. Chassis
5. Frontal panel
6. Horizontal louver
7. Vertical louver
8. Air filter
9. Manual control button
10. Remote controller holder
11. Remote controller
12. Connecting pipe
13. Drain hose
14. Power cord

Outdoor Unit

12. Connecting cable
13. Connective pipe
14. Stop valve

LED PANEL ON INDOOR UNIT

LCD DISPLAY WINDOW



OPERATION indication lamp

This lamp illuminates when the air conditioner is in operation.



AUTO indication lamp

Lights up during Auto operation.



TIMER indication lamp

Lights up during Timer operation.



CLEAN AIR indication lamp

Lights up when CLEAN AIR feature is activated and Ionizer can generate abundant anions to fill the room with refreshing and natural air.



DEFROST indication lamp

- In Heating mode, if a layer of frost forms on the outdoor heat exchanger, defrosting automatically starts and the LED lights up.
- The LED also lights up when indoor heat exchanger's Preheating function is activated. This occurs in Heating mode, in order to avoid the emission of air at low temperature (prevention function anti-cold drafts).



TURBO indication lamp

Lights up when TURBO function is selected on Cooling operation.



DIGITAL DISPLAY indication lamp

Displays the current setting temperature when the air conditioner is in operation. When the air conditioner is in FAN ONLY operation, it displays the actual room temperature. When AUTO CLEAN feature is activated, it displays "SC".



FAN SPEED indication lamp

Displays the selected fan speed:

- AUTO (nothing)
- LOW: *
- MED: **
- HIGH: ***



OPERATION FREQUENCY display

This display is separated into five zones. The zones illuminate based on the compressor current frequency: higher frequency will illuminate more zones.

RECOMMENDED OPERATING CONDITIONS

To obtain the best performances from the Unit, it is recommended its use under the following conditions:

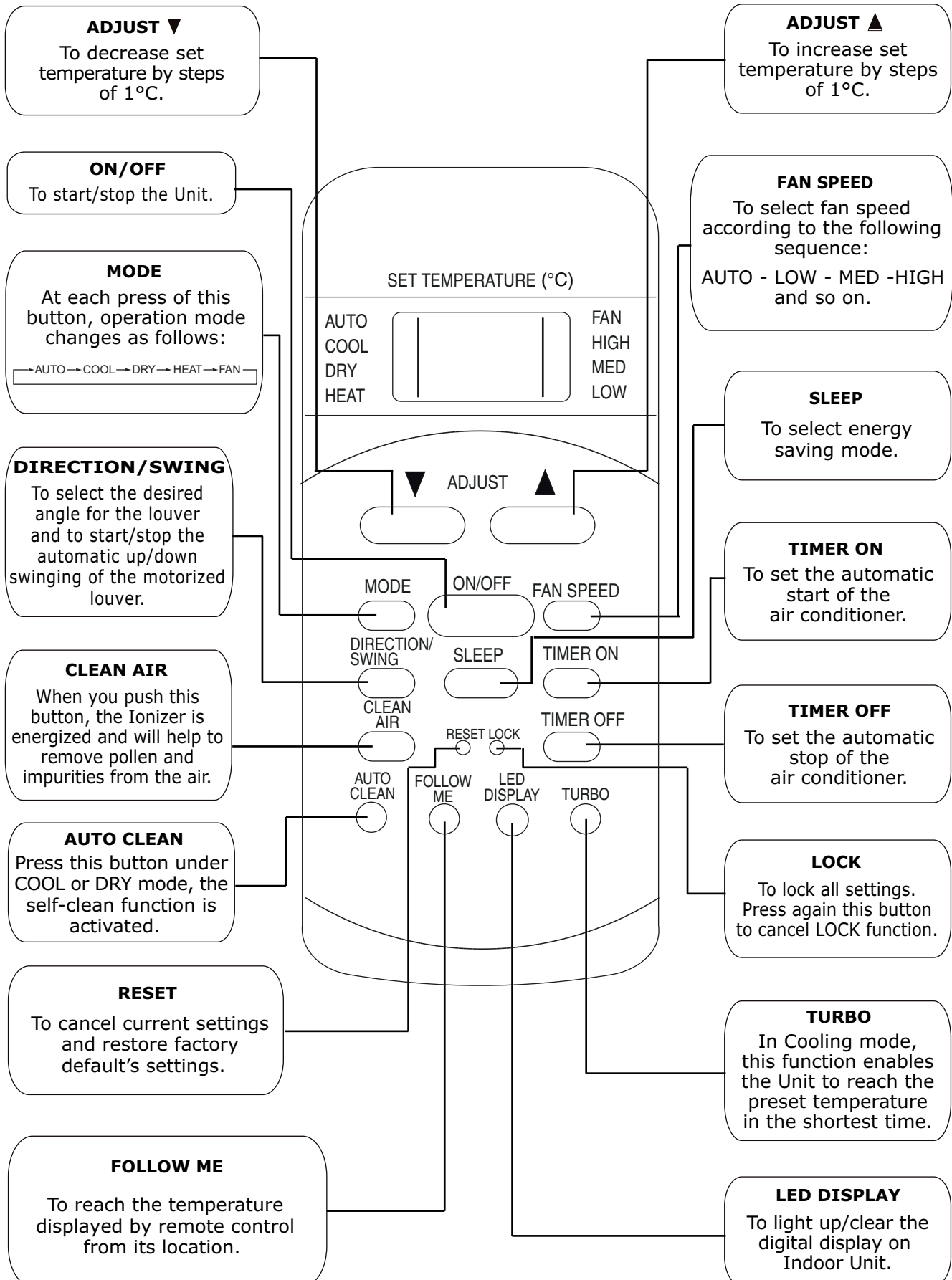
COOLING OPERATION	Outdoor temperature:	18° to 50°C
	Room temperature:	17° to 32°C
	CAUTION: Room relative humidity should be less than 80%. If the air conditioner operates beyond this limit, the surface of the heat exchanger could get covered with frost. Please set the vertical air flow louver to its maximum angle (vertically to the floor), and set HIGH fan mode.	
HEATING OPERATION	Outdoor temperature:	-15° to 34°C
	Room temperature:	17° to 27°C
DRYING OPERATION	Outdoor temperature:	10° to 50°C
	Room temperature:	10° to 32°C

Use of the air conditioner out of the above mentioned temperature ranges could cause the intervention of built-in protective functions consequently stopping the system operation.

NOTE: If the Unit operates in rooms which are saturated with oil vapors or volatile matters, harmful substances could coat and clog the indoor unit heat exchanger. Besides, scalings of saltiness could form on the Outdoor Units installed in sea-surroundings; if not removed, they will damage the Units in a very short time. In both cases, please contact the Authorized Technical Service to require frequent maintenance.

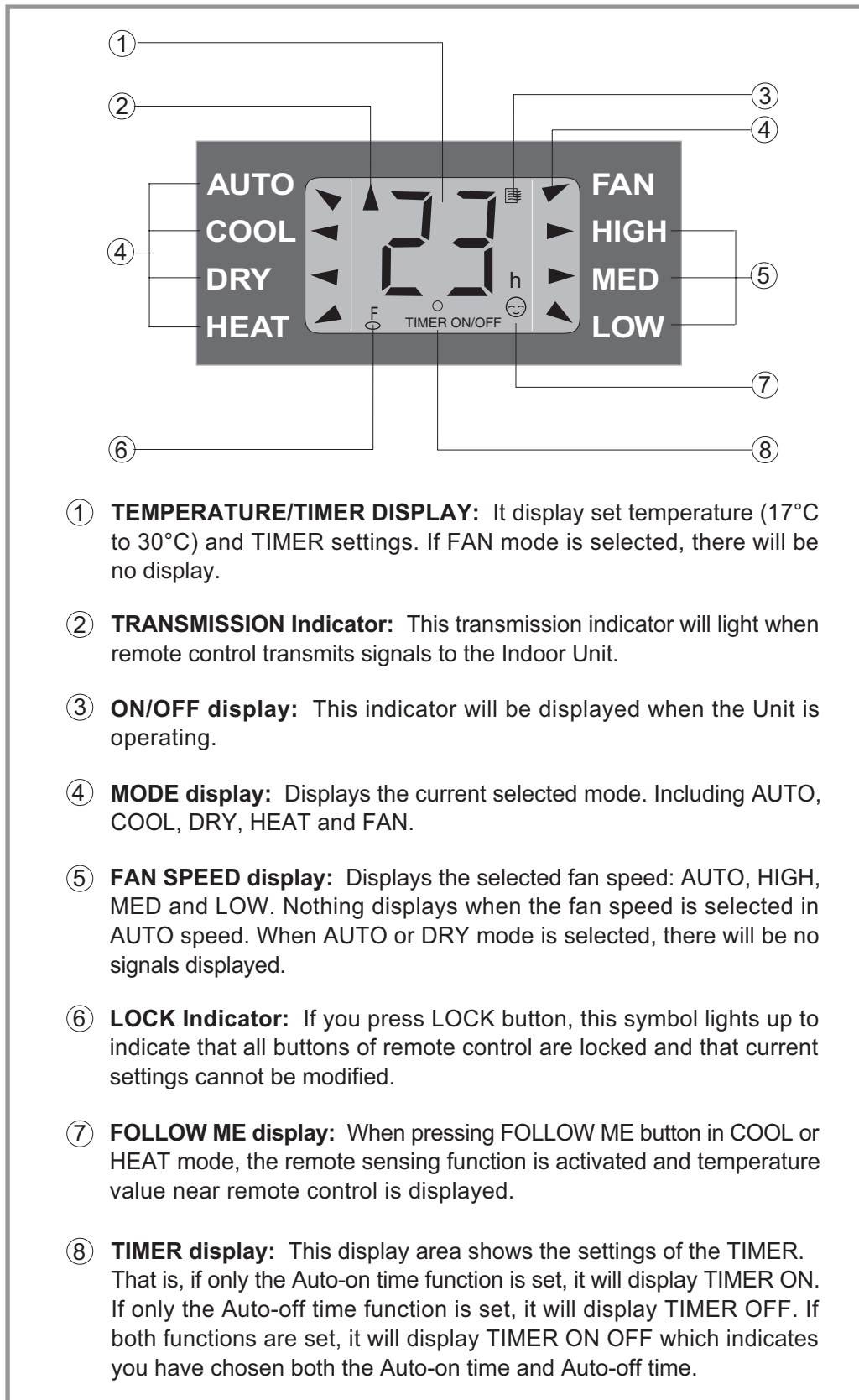
INFRARED REMOTE CONTROLLER

Buttons' outline



INFRARED REMOTE CONTROLLER

LCD panel outline

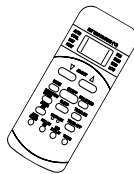
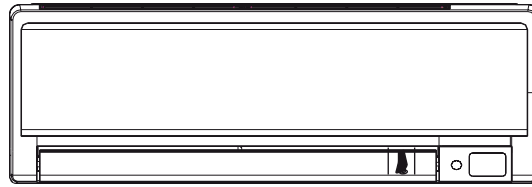


- ① **TEMPERATURE/TIMER DISPLAY:** It display set temperature (17°C to 30°C) and TIMER settings. If FAN mode is selected, there will be no display.
- ② **TRANSMISSION Indicator:** This transmission indicator will light when remote control transmits signals to the Indoor Unit.
- ③ **ON/OFF display:** This indicator will be displayed when the Unit is operating.
- ④ **MODE display:** Displays the current selected mode. Including AUTO, COOL, DRY, HEAT and FAN.
- ⑤ **FAN SPEED display:** Displays the selected fan speed: AUTO, HIGH, MED and LOW. Nothing displays when the fan speed is selected in AUTO speed. When AUTO or DRY mode is selected, there will be no signals displayed.
- ⑥ **LOCK Indicator:** If you press LOCK button, this symbol lights up to indicate that all buttons of remote control are locked and that current settings cannot be modified.
- ⑦ **FOLLOW ME display:** When pressing FOLLOW ME button in COOL or HEAT mode, the remote sensing function is activated and temperature value near remote control is displayed.
- ⑧ **TIMER display:** This display area shows the settings of the TIMER. That is, if only the Auto-on time function is set, it will display TIMER ON. If only the Auto-off time function is set, it will display TIMER OFF. If both functions are set, it will display TIMER ON OFF which indicates you have chosen both the Auto-on time and Auto-off time.

**All Indicators are shown in the above Figure for explanation only.
During real operation, the display will only show the Indicators corresponding
to the User's selections.**

INFRARED REMOTE CONTROLLER

Installation & correct use of remote controller



Max. allowed distance: 8 metres

- 1) Make sure the 2 batteries ("AAA" type, 1.5V) are fully charged and correctly fitted in the special slot on the remote controller, by respecting the polarity marked on the remote controller itself. The batteries' average life is of about 6 months ~ 1 year.
- 2) Use the remote controller by turning it towards the Indoor Unit at no more than 8 metres from the Unit itself.
- 3) The remote controller will not work properly if curtains, doors or other objects placed between the remote controller and the infrared receiver on the Indoor Unit do not allow the signal transmission.
- 4) If the remote controller is placed sideways as regards to the signal receiver, it will operate within a max. angle of 30° on the right or on the left from the receiver. If the remote controller is fixed on its wall bearing, it will work within a side distance of 0.5 metres on the right or on the left from the receiver.
- 5) If the infrared receiver on Indoor Unit is exposed to direct sunlight, the remote controller (and consequently the air conditioner) probably will not work properly.
- 6) In order to avoid interferences, keep the remote controller at least 1 metre away from Hi-Fi, TV, radio and in general from appliances generating electromagnetic fields.
- 7) If the remote controller stops to operate correctly, press "RESET" button on the remote controller to cancel current settings and restore factory defaults' settings. Check if correct operation of remote controller has been restored.
- 8) Do not wet the remote controller and prevent any liquid from falling into it.
- 9) Handle the remote controller with care and pay attention not to drop it nor place heavy objects on it. Keep it far away from heat sources such as heaters, cooking stoves, electric blankets, etc.
- 10) Never use solvents nor strong detergents for cleaning the remote controller. Only use a soft, clean and dry cloth.

INFRARED REMOTE CONTROLLER

Batteries' replacement

If after the transmission of a signal by remote controller the confirmation sound emitted by the Indoor Unit's buzzer is no more heard, or the indicator on remote controller's display does not light up, batteries must be replaced.

To open the battery case, see the Figure below.

CAUTION!

If after replacing batteries the remote controller does not work, remove batteries and reinsert them after a few minutes, or press the inner button "RESET" on remote controller.

- Always insert two new batteries of AAA type (1.5V) type of the same brand (never insert one new battery and one old battery, as this may cause a malfunction).

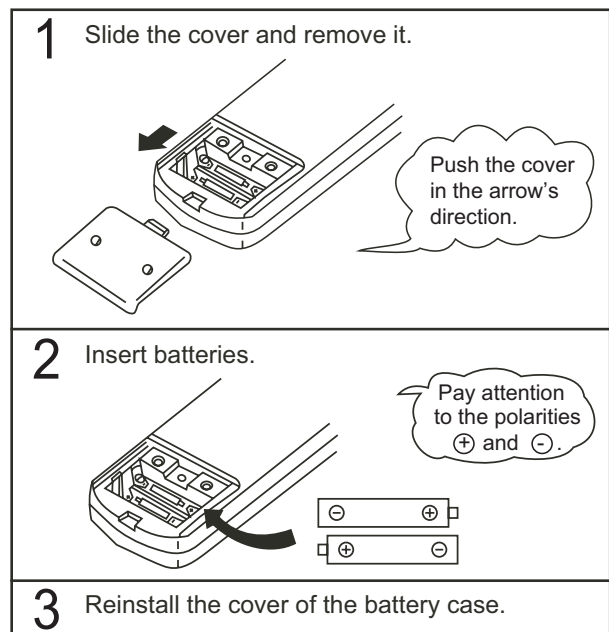
- Please observe the batteries' polarity ("+" / "-") marked on the battery case and on the batteries themselves.

- Before closing the battery case's cover, check if the remote controller displays "0:00" with flashing colon.

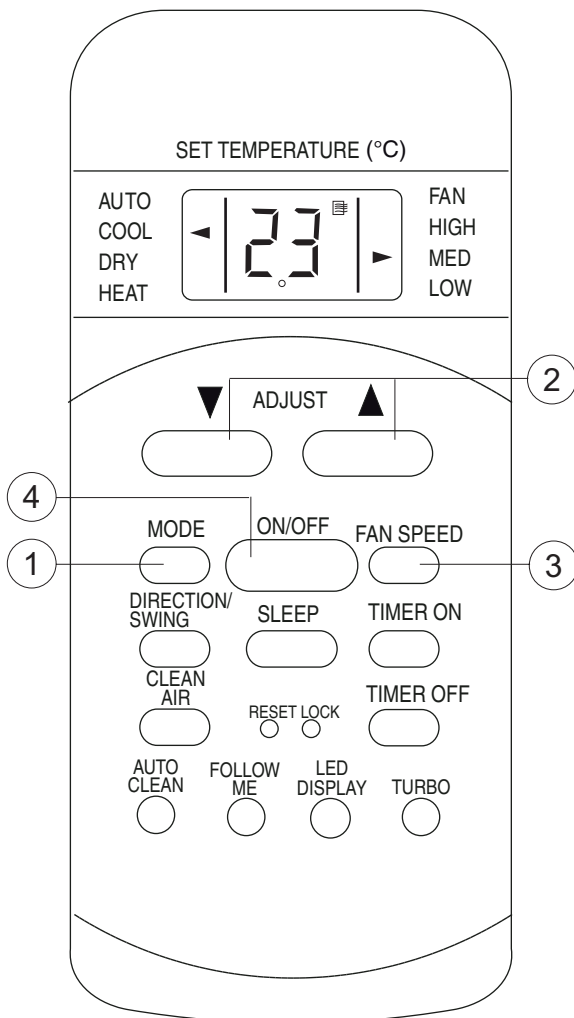
- Remove batteries from remote controller if you foresee not to use it for several weeks. A leakage of acid may damage the remote controller.

- Normal average life of a battery set is of about 6 months ~ 1 year.

Batteries' replacement



COOL, HEAT, FAN Modes



Connecting/operating the air conditioner

Connect the air conditioner to the power source: the "OPERATION" LED on Indoor Unit's panel will start flashing.

1. Select your desired operation mode by pressing "MODE" button:
 - COOL
 - HEAT
 - FAN
2. Press "ADJUST" buttons to select your desired temperature.
3. Select your desired fan speed by pressing "FAN SPEED" button:
 - AUTO
 - LOW
 - MED
 - HIGH
4. Press "ON/OFF" button to start the air conditioner: "OPERATION" LED on Indoor Unit's panel will stop flashing and will light up.
In COOL & HEAT modes, operation starts after approximately 3 minutes; if you select FAN mode, the Unit will start immediately.

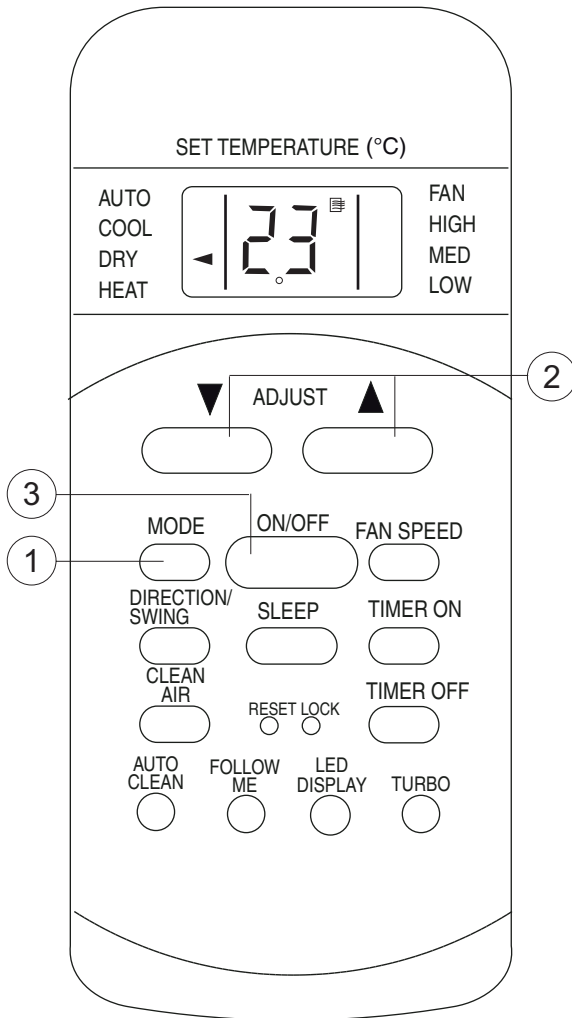
Stop

Press "ON/OFF" button on remote control to stop the air conditioner's operation.

NOTES:

1. In "FAN" mode, it is not possible to select your desired room temperature. Therefore, please move directly from above item No. 1 to item No. 3.
2. Operation in COOL, HEAT & FAN modes is memorized by the microcomputer, so if you would like to keep it for next operation of the air conditioner, you only need to press "ON/OFF" button on remote control. Set temperature and fan speed settings will be memorized too, so they will be the same at next restart of the air conditioner.
3. It is possible to change operation mode while the air conditioner is operating. However, the Unit will not immediately start operating according to the new mode, but a little delay is needed for carrying out a test and choosing new operating parameters.

DRY Mode



DRY mode is a Cooling mode at low fan speed; the refrigerant flow through indoor heat exchanger is compatible with low fan speed, so as to allow the condensation of room humidity without changing of air temperature.

Operation in DRY mode dries the air.

Connecting/operating the air conditioner

Connect the air conditioner to the power source: "OPERATION" LED on Indoor Unit's panel will start flashing.

1. Select "DRY" mode by pressing "MODE" button.
2. Select your desired temperature by pressing "ADJUST" buttons.
3. Start the air conditioner by pressing "ON/OFF" button: "OPERATION" LED on Indoor Unit's panel will stop flashing and will light up.

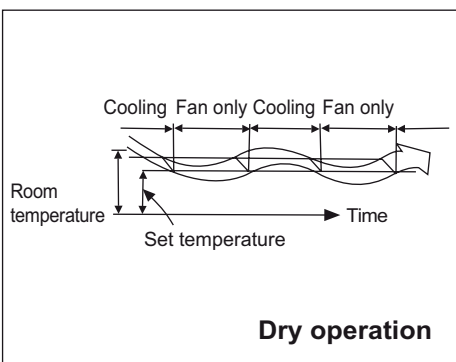
Detail of operation in DRY mode

Inner electronics automatically selects the operation mode according to the difference between set temperature and room temperature.

The temperature is regulated while dehumidifying by repeating turning on and off of the Cooling operation or Fan only. The fan speed is LOW.

Stop

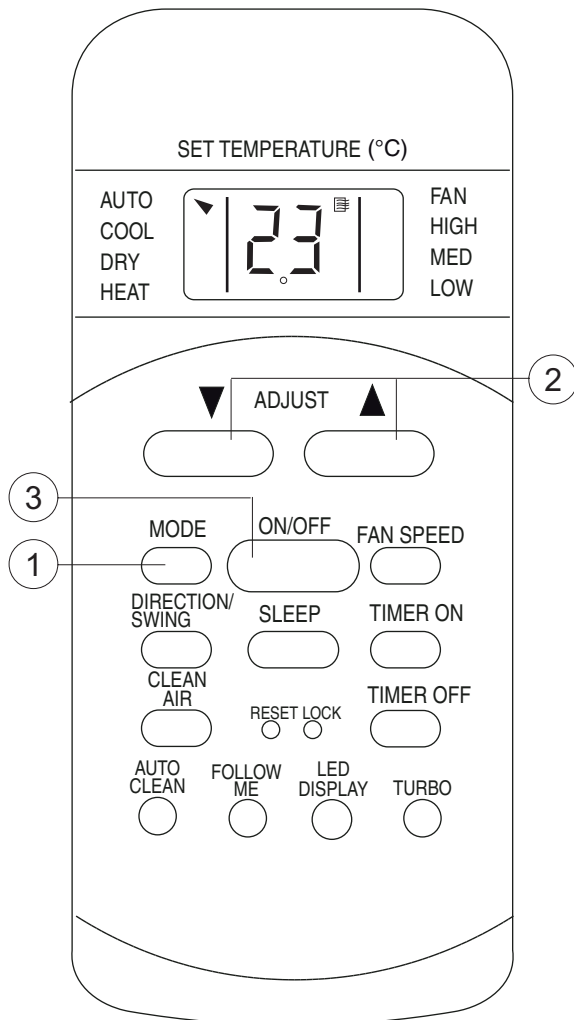
Press "ON/OFF" button on remote control to stop the air conditioner's operation.



NOTES:

1. In "DRY" mode, it is not possible to select your desired fan speed, as it will be automatically controlled by the microcomputer (no fan speed indicator displays).
2. "DRY" mode, as well as other operation modes, is memorized by the microcomputer, so if you would like to keep it at next restart of the air conditioner, you only need to press "ON/OFF" button.
3. It is possible to change operation mode while the air conditioner is running in "DRY" mode. However, the Unit will not immediately start operating according to the new mode, but a little delay is needed for carrying out a test and choosing new operating parameters.

AUTO Mode



When AUTO mode is selected, the air conditioner automatically chooses the suitable operation settings according to room temperature and eventually to the temperature set by the User.

The four possible options are among: "COOL", "DRY", "HEAT", "FAN".

Connecting/operating the air conditioner

Connect the air conditioner to the power source: "OPERATION" LED on Indoor Unit's panel will start flashing.

1. Select "AUTO" mode by pressing "MODE" button.
2. Select your desired temperature by pressing "ADJUST" buttons.
3. Press "ON/OFF" button to start the air conditioner: "OPERATION" LED on Indoor Unit's panel will stop flashing and will light up.

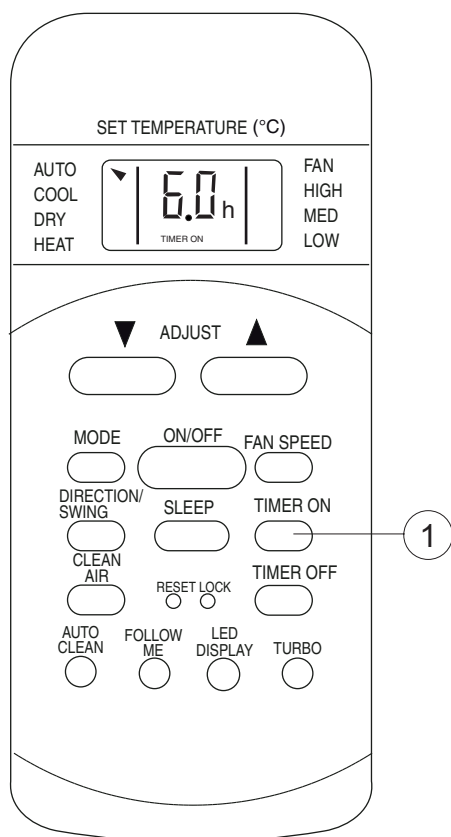
Stop

Press "ON/OFF" button on remote control to stop the air conditioner's operation.

NOTES:

1. In "AUTO" mode, it is not possible to select your desired fan speed, as it will be automatically controlled by the microcomputer (no fan speed indicator displays).
2. "AUTO" mode, as well as other operation modes, is memorized by the microcomputer, so if you would like to keep it at next restart of the air conditioner, you only need to press "ON/OFF" button on remote controller.
3. It is possible to change operation mode while the air conditioner is running in "AUTO" mode. However, the Unit will not immediately start operating according to the new mode, but a little delay is needed for carrying out a test and choosing new operating parameters.

TIMER ON (Programmed Start)



TIMER ON function allows you to program the automatic start of the air conditioner according to your needs. In this way, the air conditioner will start operating at your desired time.

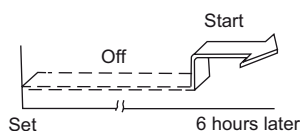
Programmed Start - TIMER ON

1. Press TIMER ON button: remote controller will display "TIMER ON" indication, the signal "h" and the digits for programming the setting. The remote controller is ready to receive the setting for TIMER ON.
2. Press again TIMER ON button for several times, till reaching your desired time for the air conditioner's automatic start. At each press of the button, time increases by 30-minutes' steps till 10 hours, and by 60-minutes' steps from 10 to 24 hours.
3. After 0.5 seconds since the time for programmed start was set, the remote controller will send settings to the Indoor Unit. After 2 seconds, the signal "h" will go out and remote control will display set temperature again.

CAUTION !

When "TIMER" function is selected, the remote controller automatically sends signals for programmed start/stop to the Indoor Unit. If you would like to be sure that these signals are received by Indoor Unit, it is necessary to address the remote controller towards the Indoor Unit's signal receiver, and check that no obstacles could affect the impulses' transmission.

Example of TIMER ON setting



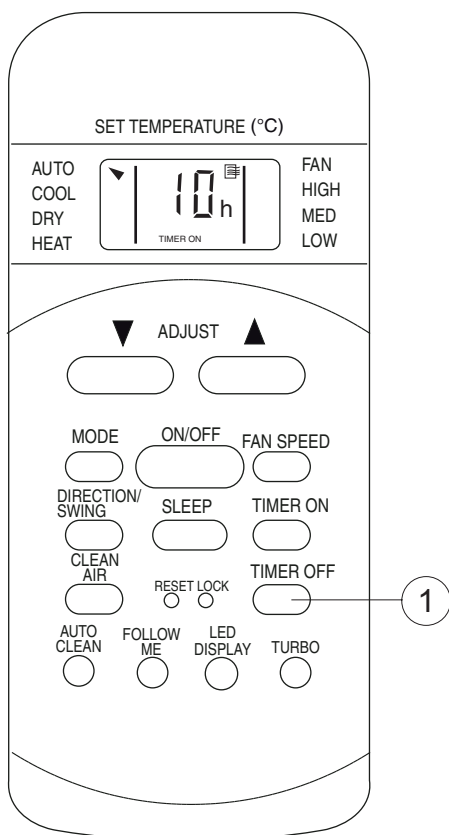
To start the air conditioner in 6 hours:

1. Press the TIMER ON button: the last setting of starting operation time and the signal "h" will show on the display area.
2. Press the TIMER ON button to display "6:0h" on the TIMER ON display of the remote controller.
3. Wait for 0.5 seconds: the TIMER ON indicator stops flashing and this function is activated. The digital display area will show the temperature again.

NOTES:

1. Time increases are 30-minutes' steps till 10 subsequent hours, and 60-minutes' steps from 10 to 24 hours. The remote controller's Timer is not a clock, so it is necessary to set the time period - not the exact time - for programmed start.
2. Unlike operation modes, TIMER settings are not kept in memory by the microcomputer, therefore if a power failure occurs, TIMER settings will be cancelled and need to be set again.
3. Before selecting TIMER settings, it is possible to choose your desired operation mode.
4. TIMER max. range is 24 hours, i.e. it is not possible to operate weekly settings.
5. To modify TIMER settings, press again TIMER ON button and repeat the above procedure for TIMER ON setting.

TIMER OFF (Programmed Stop)



TIMER OFF function allows you to program the automatic stop of the air conditioner according to your needs. In this way, the air conditioner will stop operating at your desired time.

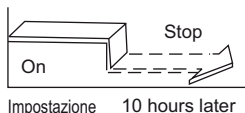
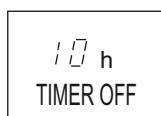
Programmed Stop - TIMER OFF

1. Press TIMER OFF button: remote controller will display "TIMER OFF" indication, the signal "h" and the digits for programming the setting. The remote controller is ready to receive the setting for TIMER OFF.
2. Press again TIMER OFF button for several times, till reaching your desired time for the air conditioner's automatic stop. At each press of the button, time increases by 30-minutes' steps till 10 hours, and by 60-minutes' steps from 10 to 24 hours.
3. After 0.5 seconds since the time for programmed stop was set, the remote controller will send settings to the Indoor Unit. After 2 seconds, the signal "h" will go out and remote control will display set temperature again.

CAUTION !

When "TIMER" function is selected, the remote controller automatically sends signals for programmed start/stop to the Indoor Unit. If you would like to be sure that these signals are received by Indoor Unit, it is necessary to address the remote controller towards the Indoor Unit's signal receiver, and check that no obstacles could affect the impulses' transmission.

Example of TIMER OFF setting



To stop the air conditioner in 10.00 hours:

1. Press the TIMER OFF button: the last setting of stopping operation time and the signal "h" will show on the display area.
2. Press the TIMER OFF button to display "10h" on the TIMER OFF display of the remote controller.
3. Wait for 0.5 seconds; the TIMER OFF indicator stops flashing and this function is activated. The digital display area will show the temperature again.

NOTES:

1. Time increases are 30-minutes' steps till 10 subsequent hours, and 60-minutes' steps from 10 to 24 hours. The remote controller's Timer is not a clock, so it is necessary to set the time period - not the exact time - for programmed stop.
2. Unlike operation modes, TIMER settings are not kept in memory by the microcomputer, therefore if a power failure occurs, TIMER settings will be cancelled and need to be set again.
3. Before selecting TIMER settings, it is possible to choose your desired operation mode.
4. TIMER max. range is 24 hours, i.e. it is not possible to operate weekly settings.
5. To modify TIMER settings, press again TIMER OFF button and repeat the above procedure for TIMER OFF setting.

TIMER FUNCTION

COMBINED TIMER (Setting both ON and OFF timers simultaneously)

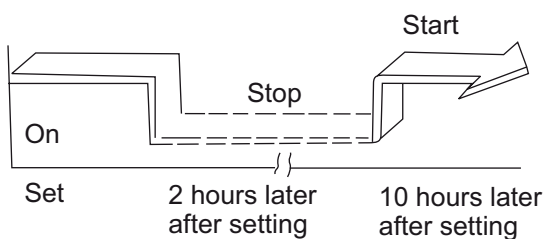
TIMER ON/OFF or TIMER OFF/ON function allows you to set the automatic start/stop or stop/start of the air conditioner at your desired time.

TIMER OFF → TIMER ON (On → Stop → Start operation)

This feature is useful when you want to stop the air conditioner after you go to bed, and start it again in the morning when you wake up or when you return home.

Example

To stop the air conditioner 2 hours after setting and start it again 10 hours after setting.



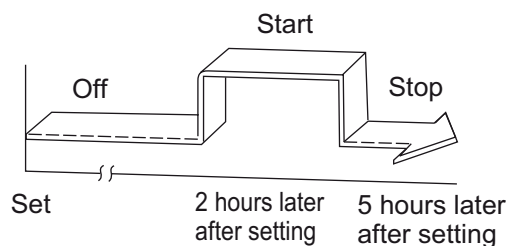
1. Press the TIMER OFF button.
2. Press the TIMER OFF button again to display “2.0h” on the TIMER OFF display.
3. Press the TIMER ON button.
4. Press the TIMER ON button again to display “10h” on the TIMER ON display.
5. Wait for the remote control to display the setting temperature.

TIMER ON → TIMER OFF (Off → Start → Stop operation)

This feature is useful when you want to start the air conditioner before you wake up and stop it after you leave the house.

Example

To start the air conditioner 2 hours after setting, and stop it 5 hours after setting.



1. Press the TIMER ON button.
2. Press the TIMER ON button again to display “2.0h” on the TIMER ON display.
3. Press the TIMER OFF button.
4. Press the TIMER OFF button again to display “0.5h” on the TIMER OFF display.
5. Wait for the remote control to display the setting temperature.

CAUTION !

When “TIMER” function is selected, the remote controller automatically sends signals for programmed start & stop to the Indoor Unit. If you would like to be sure that these signals are received by Indoor Unit, it is necessary to address the remote controller towards the Indoor Unit's signal receiver, and check that no obstacles could affect the impulses' transmission.

NOTES

1. Time increases are 30-minutes' steps till 10 subsequent hours, and 60-minutes' steps from 10 to 24 hours. The remote controller's Timer is not a clock, so it is necessary to set the time period - not the exact time - for programmed start/stop.
2. Unlike operation modes, TIMER settings are not kept in memory by the microcomputer, therefore if a power failure occurs, TIMER settings will be cancelled and need to be set again.
3. Before selecting TIMER settings, it is possible to choose your desired operation mode.
4. TIMER max. range is 24 hours, i.e. it is not possible to operate weekly settings.

"SLEEP" (ENERGY SAVING) FUNCTION

SLEEP Mode

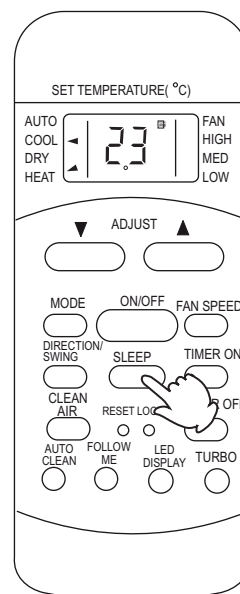
Before you go to bed, you can press SLEEP button and the air conditioner will run so as to make your sleep more comfortable.

Use of SLEEP function

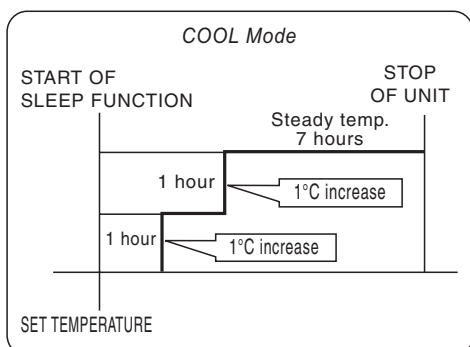
After the Unit's start, select COOL, HEAT or AUTO mode and then press SLEEP button once to activate "Sleep" Energy Saving function.

In SLEEP mode, fan speed is automatically controlled by inner electronics.

After 7 hours of continuous operation in SLEEP mode, Unit will automatically stop.



SLEEP function is available in COOL, HEAT and AUTO modes.



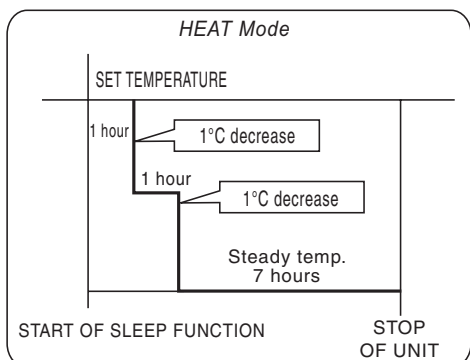
1. COOL Mode

After SLEEP function has started off, set temperature increases by 1°C each hour for 2 hours.

Then, SLEEP mode runs at steady temperature and LOW fan speed.

Actual temperature is higher than set temperature to prevent the room from getting too cold.

This function also allows to save electricity.



2. HEAT Mode

After SLEEP function has started off, set temperature decreases by 1°C each hour for 2 hours.

Then, SLEEP mode runs at steady temperature and LOW fan speed.

Actual temperature is lower than set temperature to prevent the room from getting too hot.

This function also allows to save electricity.

3. AUTO Mode

SLEEP function runs according to AUTO operation mode.

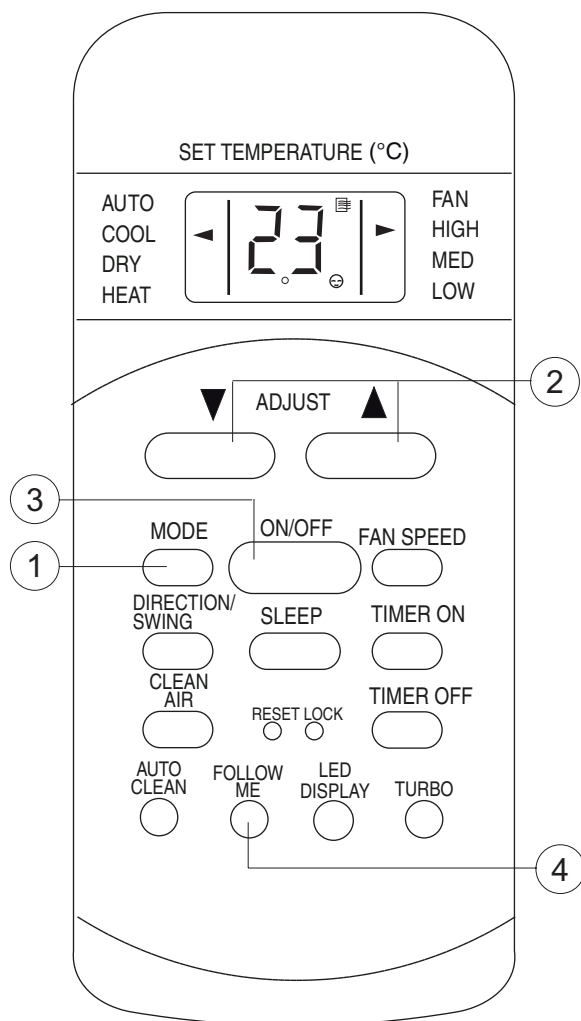
To cancel SLEEP function

Press SLEEP button again to cancel the function.

WARNING! If Unit is operating and SLEEP function has been selected, the function is cancelled if whatever button of remote control is pressed.

"FOLLOW ME" FUNCTION

FOLLOW ME Mode



Outline of "Follow Me" function

In "Follow Me" function, remote control operates as a remote thermostat, allowing a precise control of temperature from its location.

Connecting/Operating the air conditioner

Connect the air conditioner to the power source: "OPERATION" LED on Indoor Unit's panel will start flashing.

1. Select your desired operation mode by pressing "MODE" button.
2. Select your desired temperature by pressing "ADJUST" buttons.
3. Press "ON/OFF" button to start the air conditioner "OPERATION" LED on Indoor Unit's panel will stop flashing and will light up.
4. Address the remote control towards the Indoor Unit and press the "FOLLOW ME" button. The remote control displays actual temperature from its location. The remote control sends this signal to the Indoor Unit every 3 minutes, till the button is pressed again. If the Unit does not receive "Follow Me" signal for 7 minutes, the Unit will beep to indicate that "Follow Me" feature has ended.

To cancel FOLLOW ME function

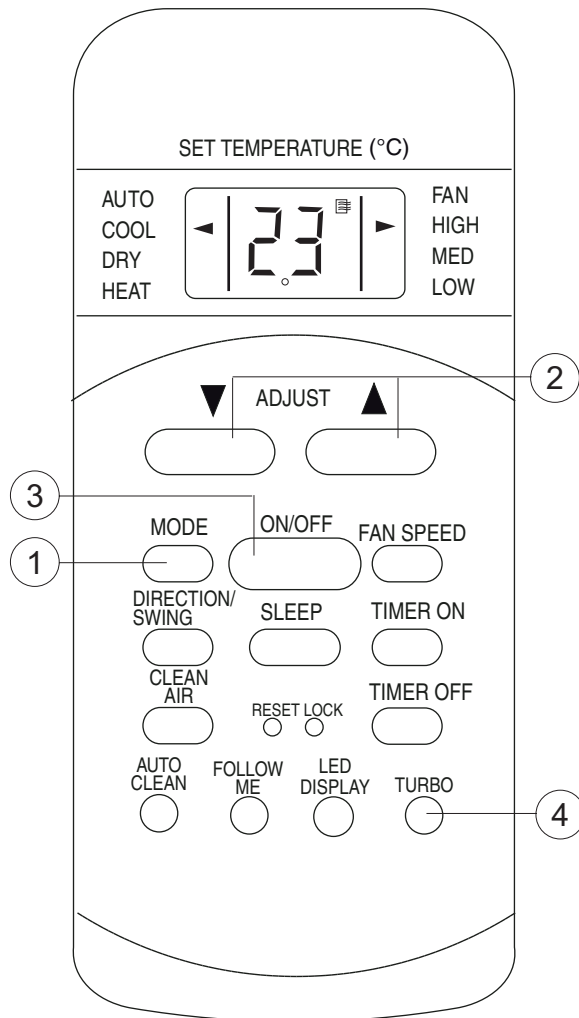
Press again "FOLLOW ME" button to cancel the function.

Stop

Press "ON/OFF" button on remote control to stop the air conditioner's operation.

"TURBO" FUNCTION

TURBO function



Outline of "Turbo" function


"Turbo" function allows you to reach your desired temperature more quickly.

"TURBO" button, related to this function, is available in COOL mode only.

Connecting/Operating the air conditioner

Connect the air conditioner to the power source:

"OPERATION" LED on Indoor Unit's panel will start flashing.

1. Press "MODE" button and select COOL mode.
2. Select your desired temperature by pressing "ADJUST" buttons.
3. Press "ON/OFF" button to start the air conditioner: "OPERATION" LED on Indoor Unit's panel will stop flashing and will light up.
4. Press "TURBO" button: Unit will blow strong cooling air with super high fan speed. The display on Indoor Unit's panel will show the indicator .

To cancel TURBO function

Press again "TURBO" button to cancel the function.

Stop

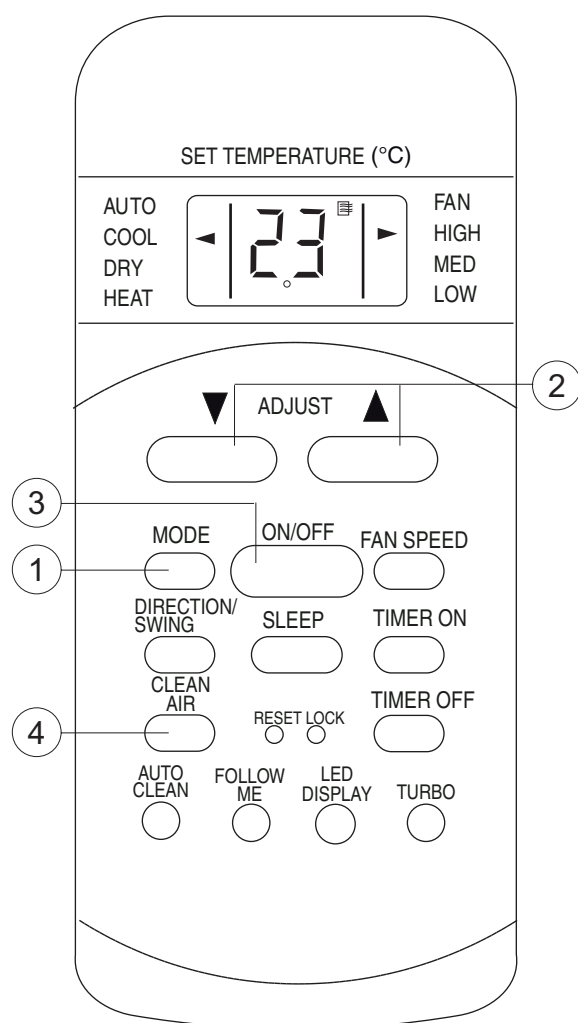
Press "ON/OFF" button on remote control to stop the air conditioner's operation.

NOTE:

- The Unit system will automatically revert back to the previous settings after continue operating under powerful Cooling mode.

"CLEAN AIR" FUNCTION

CLEAN AIR Mode



Outline of "Clean Air" function

Air quality is the key to comfort. This air conditioner is equipped with Ionizer device: Ionizer can generate abundant anions to fill the room with refreshing and nature air.

Thanks to "Clean Air" function, your whole family will enjoy a natural, pure and healthy air everyday.

Connecting/Operating the air conditioner

Connect the air conditioner to the power source: "OPERATION" LED on Indoor Unit's panel will start flashing.

1. Select your desired operation mode by pressing "MODE" button.
2. Select your desired temperature by pressing "ADJUST" buttons.
3. Press "ON/OFF" button to start the air conditioner: "OPERATION" LED on Indoor Unit's panel will stop flashing and will light up.
4. Press "CLEAN AIR" button: Ionizer is activated and a great amount of anions are generated, which remove impurities and purify air. The display on Indoor Unit's panel shows the indicator (Ion).

To cancel CLEAN AIR function

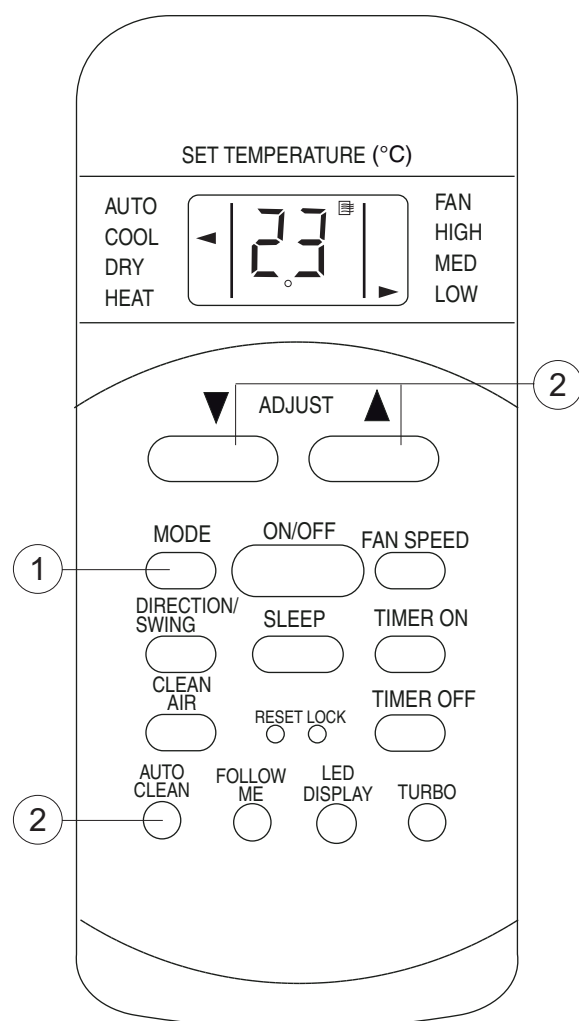
Press again "CLEAN AIR" button to cancel the function.

Stop

Press "ON/OFF" button on remote control to stop the air conditioner's operation.

"AUTO CLEAN" FUNCTION

AUTO CLEAN Mode



Outline of "Auto Clean" function

Thanks to this function, the air conditioner is able to carry on the self-cleaning.

"Auto Clean" function is used after the shut down of COOLING operation to clean the Evaporator and keep it fresh for the next operation.

This function is only available under COOL (AUTO COOL, FORCED COOL) and DRY mode.

Before selecting the function, it is recommended to run the air conditioner under Cooling operation for about half an hour.

Selecting AUTO CLEAN function

1. Press "MODE" button and select COOL or DRY mode.
2. To select self-clean function, press "AUTO CLEAN" button on remote controller.
 - The Unit will operate: FAN ONLY mode at LOW fan speed (13 minutes), HEATING operation with LOW fan speed (1 minute), and finally FAN ONLY operation (2 minutes). Then operation will stop and Unit will be turned off.

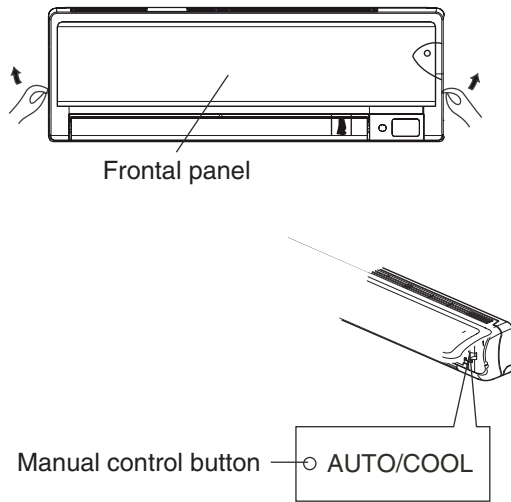
Note

If "Auto Clean" function is selected and TIMER was programmed, TIMER selections will be cancelled.

To cancel AUTO CLEAN function

Press again "AUTO CLEAN" button to cancel the function: the operation will be stopped and Unit will turn off.

EMERGENCY OPERATION AND TEST SWITCH



Control panel

To reach the control panel, lift the front panel before.

- **Opening the front panel:**

Pull up the front panel at both ends till a click is heard and the panel remains fixed. Do not lift the panel any further because the hinges could get broken.

- **Closing the front panel:**

Push down the front panel at both ends. Close the panel firmly.

Operation in Emergency mode:

If you have lost the remote controller or its batteries are exhausted, the air conditioner can be started by pressing the "AUTO/COOL" Manual control button on the frontal panel.

Press "Manual" button once: "OPERATION" lamp on Indoor Unit will light up, and the air conditioner will work in forced AUTO mode.

The default setting temperature is 24°C.

Testing the air conditioner:

If you press "Manual" button, operation mode is shifted in an order as: AUTO -- COOL -- OFF.

Operate Unit in forced COOL mode.

This is used for Testing purposes only.

End of operation in Emergency mode or Test mode:

Press once the "AUTO/COOL" Manual control button on the front panel while the air conditioner is operating in Emergency mode or in Test mode: operation will be immediately stopped. Use the remote controller to return to normal operation.

NOTE: Do not use Emergency/Test function as the normal operating mode of the air conditioner.

ADJUSTING THE AIRFLOW DIRECTION

Adjusting the vertical airflow direction

The inner electronics automatically selects the best position for the louver according to the operation mode:

- in **HEATING** mode: the flaps are vertically set
- in **COOLING** mode: the flaps are horizontally set.

SETTING YOUR PREFERENCES

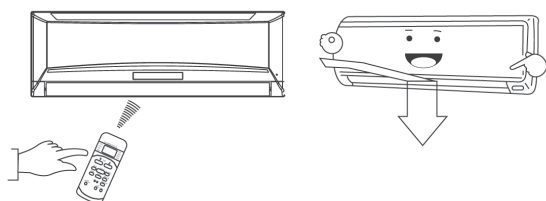
Adjust the air direction properly to obtain a higher degree in comfort and to avoid harmful drafts. The vertical direction of the airflow can be set through the infrared remote control.

VERTICAL AIRFLOW

Stop the flaps at your desired position:

Perform this setting while the air conditioner is operating.

Press the "DIRECTION/SWING" button on remote control till the desired angle for the louver is reached. Each time the button is pressed, the louver moves by 6°.

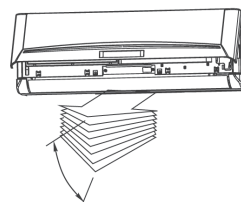


Automatic SWINGING of the louver:

Perform this setting while the air conditioner is operating.

Keep pressing the "DIRECTION/SWING" button without releasing for more than 2 seconds: the horizontal louver will swing up and down continuously.

Press the "DIRECTION/SWING" button again to stop the automatic swinging of the louver.



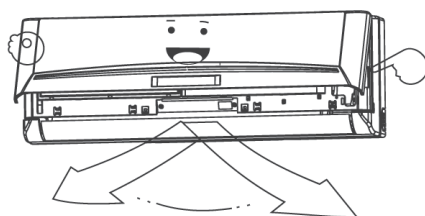
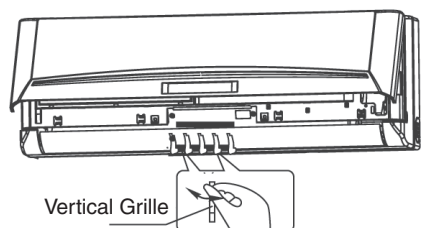
WARNING

- The "DIRECTION/SWING" button will be disabled when the air conditioner is not operating.
- To avoid malfunctions, NEVER attempt to move the flaps by hand but always use the remote control for doing this.
- When the air conditioner is turned on, the motorized louver will start moving 10 seconds later, as soon as it gets under control of the inner electronics. When the air conditioner is stopped, the motorized louver will automatically stop in closing position. If the motorized louver malfunctions, it is advised to turn off the air conditioner and cut the power for some minutes; then restore the power, turn the Unit on again and check if the louver works properly.
- Do not operate the air conditioner for a long time with the airflow direction set downward in Cooling and Dry mode; this may cause dripping from the louver inside the room.
- Open angle of the horizontal louver should not be set too small, as Cooling or Heating performance may be impaired due to too restricted airflow area.
- Do not operate Unit with horizontal louver in closed position.
- Room temperature humidity should be less than 80%. If the air conditioner operates beyond this limit, the surface of indoor heat exchanger could get covered with frost: in this case, adjust the louver to the maximum open angle and select HIGH fan speed.
- When the air conditioner is connected to power (initial power), the horizontal louver may generate a sound for 10 seconds: this is a normal operation.

ADJUSTING THE AIRFLOW DIRECTION

Adjusting the horizontal airflow direction

Horizontal airflow direction can be MANUALLY set by moving the vertical outlet grille behind the horizontal flap.



Setting your preferences:

BEFORE YOU START:

Use the “DIRECTION/SWING” button on remote control to move the vertical airflow louver in the middle position.

In this way you will have access to the levers on the airflow grills laying behind; manually move them to the desired position in order to adjust airflow direction.

Automatic setting:

No automatic setting is available to select the angle for vertical outlet grille.

CLEANING AND MAINTENANCE OF THE AIR CONDITIONER

Indoor Unit's cleaning

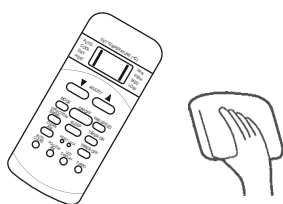


WARNING

Before starting any kind of ordinary maintenance:

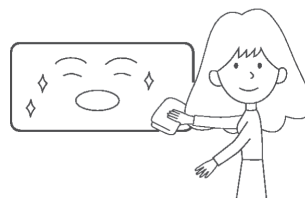
- 1 - Stop the appliance by pressing "ON/OFF" button on remote controller;
- 2 - Move the circuit breaker to "OFF" or "0" position;
- 3 - Pull the plug out of the power socket;
- 4 - To reach the Unit, please use a stepladder or other appropriate bearing strong enough to ensure your safety.

Cleaning the remote controller



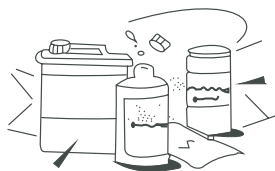
Do not use water, but a dry cloth. Do not use products for glass cleaning, nor soaked in detergents.

Cleaning the Indoor Unit



Use a dry and soft cloth. In case of need, dampen the cloth in water and neutral detergent, then wring well.

Never use any of the following products for cleaning



Benzine, paint solvents, polishing products, by-products of oil in general, etc. may damage the outside surfaces of Unit and cause deformations and scratches on the appliance and on the remote controller.



The use of very hot water (over 40°C) may discolour and/or deform the plastic parts.

NOTES:

- If the appliance or the inlet grille are very dirty, clean them with a cloth soaked in tepid water and neutral detergent. Rinse in clean water and dry well. The presence of humidity on the inlet grille may cause electric shocks.
- Never use any abrasive sponge for cleaning, to avoid scratching the Unit's surfaces.
- If the grille is open or has been removed, do not touch the metallic flaps of the heat exchanger, as the flaps are sharp and may hurt you.
- Do not expose the grille or the Unit to direct sunlight, to avoid discolouring or deforming them.

Outdoor Unit's cleaning

- Check regularly that the air inlet and outlet are not obstructed by dust or dirt in general.
- For any other cleaning or maintenance of Outdoor Unit, always contact the Authorized Technical Service.

CLEANING AND MAINTENANCE OF THE AIR CONDITIONER

Cleaning the Air Filters (polypropylene net type)



CAUTION

- Do not touch the metal parts of the Unit when removing the filters. Injuries can occur when handling sharp metal edges.
- Do not use water to clean inside the air conditioner. Exposure to water can destroy the insulation, leading to possible electric shock.
- When cleaning the Unit, first make sure that the power and circuit breaker are turned off.

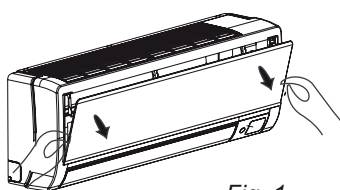


Fig. 1

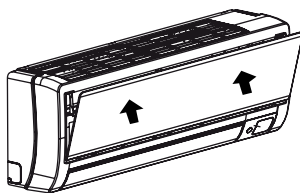


Fig. 2

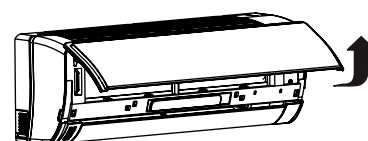
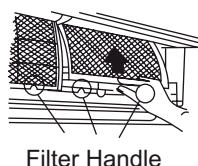


Fig. 3



Filter Handle

Fig. 4

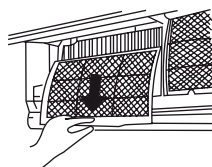


Fig. 5

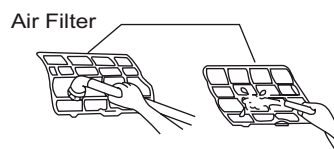


Fig. 6

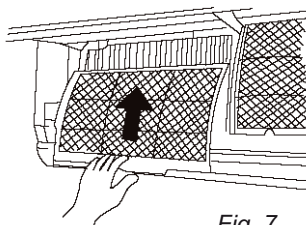


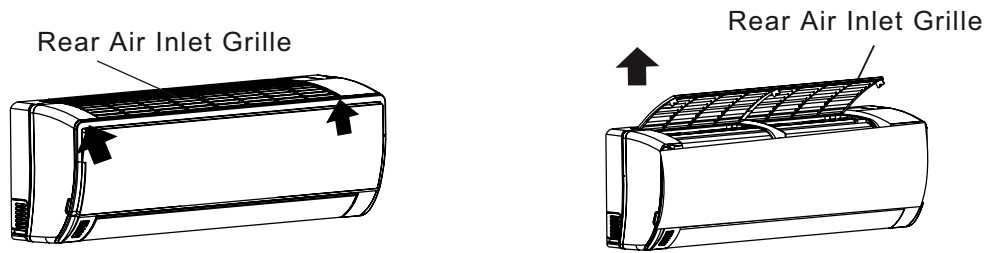
Fig. 7

Regular cleaning of the air filters (every two weeks at least) is recommended to keep the air conditioner's efficiency and to avoid a decrease in its performances. To carry on the cleaning procedure correctly, please observe carefully the following directions or contact the Authorized Technical Service.

1. Grasp both sides of the panel and pull it down (Fig. 1): the panel opens upward to an angle of 15° (Fig. 2). Push the panel upward and then lift it up. (Fig. 3).
2. Hold the handle of the air filter and lift it up slightly to take it out from the filter holder, then pull it downwards (Figures 4 e 5).
3. Clean the Polypropylene Net Filters every two weeks.
 - Clean the Filters with a vacuum cleaner or water, then dry them in a cool place (Fig. 6).
4. Re-install the Polypropylene Net Filters on the Indoor Unit (Fig. 7).

CLEANING AND MAINTENANCE OF THE AIR CONDITIONER

Cleaning the Rear Air Inlet Grille



The rear air inlet grille should be checked and cleaned every two weeks or more often if necessary. A clogged air inlet grille will reduce cooling/heating efficiency.

1. Push the right and left sides of the grille with your thumb and lift it upward, then take it out.
2. Clean it with water, then use a dry cloth to wipe it.
3. Insert the upper portion of the grille back into the Unit, taking care that the left and right edges line up correctly and place the grille into position.

If the Air Conditioner does not operate for a long period

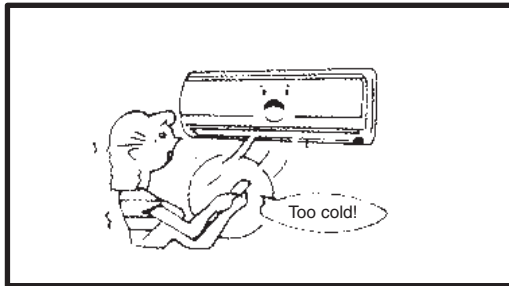
If you think not to use the air conditioner for at least one month, it is necessary to carry on a complete cleaning and then:

- Operate the air conditioner in FAN only mode for at least half a day to let the Indoor Unit dry well inside.
- Switch off the air conditioner and disconnect the power plug. Remove both batteries from the remote controller till the air conditioner is operated again.
- The Outdoor Unit requires periodic maintenance and cleaning. Do not attempt to do this yourself. Contact your dealer or servicer.

Checks before operation

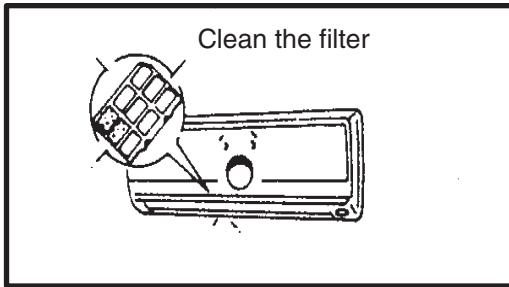
- Check that the wiring is not broken off or disconnected.
- Check that the Air Filters are correctly installed.
- Check if the air outlet or inlet is blocked after the air conditioner has not been used for a long time.

HINTS FOR ECONOMICAL OPERATION



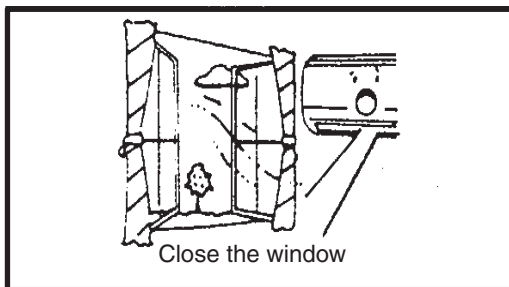
Choose an adequate temperature setting:

- When the air conditioner is operating in Heating mode, avoid to set a too high temperature value.
- When the air conditioner is operating in Cooling mode, avoid to set a too low temperature value.



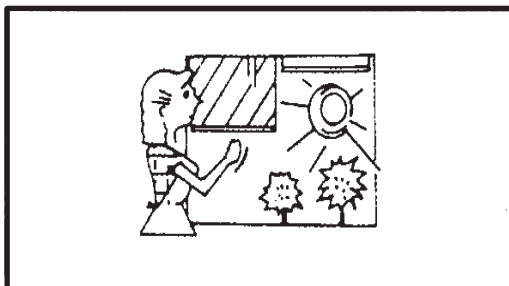
Clean the air filters quite frequently:

- To keep your air conditioner in good efficiency, it is necessary to carry on a frequent cleaning (at least every 2 weeks) of the air filters, as already explained. Accumulation of dust on the air filters reduces the air conditioner's performances.



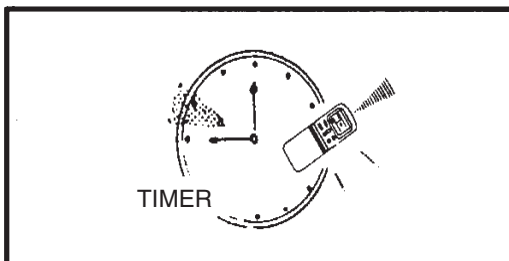
Do not leave any doors or windows open:

- This would reduce the air conditioner's efficiency and would cause an increase in electrical consumption. Moreover, in case of thermic overload, the intervention of embedded protective functions may occur, and normal operation of the air conditioner will be interrupted.



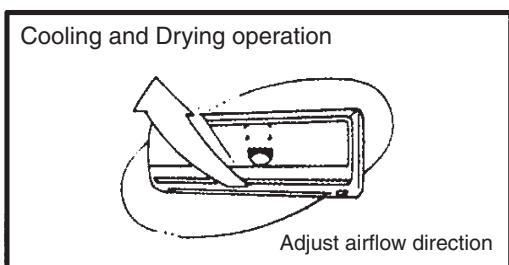
Limit exposition of the room to sunlight:

- When the air conditioner is operating in Cooling mode, you should screen by curtains the windows exposed to direct sunlight during the warmest hours of the day. In this way, you will experience substantial increase in comfort, and obtain remarkable money saving.



Use TIMER function according to real needs:

- Do not set periods of continuous operation when there is no real need for it; please consider above all the real stay of people inside that room.



Set the most suitable airflow direction:

- With some practice, you can evaluate by yourself the increase in comfort obtained by a correct setting of airflow direction. The power consumption remains the same but comfort is considerably increased (see pages 30-31).

TROUBLESHOOTING

Following symptoms are not air conditioner's troubles

The following table shows a series of seeming malfunctions.

Please check the following items before calling the Authorized Technical Service.

WHAT HAPPENS	REASON
After a stop, the air conditioner does not restarts immediately.	<ul style="list-style-type: none"> • If "OPERATION" LED on Indoor Unit lights up, it is normal that the system does not immediately restart. A protective function (3-minutes' delay) is active for preventing damages to the compressor every time the operation restarts after a stop. • If both "OPERATION" and "DEFROST" lamps light up, this is not a malfunction: the compressor does not immediately restarts because of the intervention of the anti-cold drafts protection.
Change into the "FAN" mode during "COOL" mode.	<ul style="list-style-type: none"> • In order to prevent the frosting of indoor heat exchanger, the system changes into "FAN" mode automatically, and restores to the "COOL" mode after soon. • When the room temperature value drops to the set temperature value, compressor stops and the Indoor Unit changes to "FAN" mode. When temperature rises up, the compressor starts again. It is the same in "HEAT" mode.
White mist comes out of the Indoor Unit.	<ul style="list-style-type: none"> • If during operation in "COOL" mode, humidity is high and the Indoor Unit's inside is very dirty, temperature distribution inside the room becomes uneven. It is necessary to clean the Indoor Unit: please call the Authorized Technical Service.
White mist comes out of the Outdoor Unit.	<ul style="list-style-type: none"> • During operation in "HEAT" mode. This is because the Outdoor Unit is carrying out the automatic defrosting.
Noise from the Indoor Unit or from the Outdoor Unit	<ul style="list-style-type: none"> • When the system stops after heating operation, the Indoor Unit emits a creaking sound. This is normal: expansion and contraction of plastic parts caused by temperature changes make this noise. • During the start in "COOL" mode or after the stop of "HEAT" operation, you may hear a gurgling sound or a hissing sound. This is the sound of refrigerant gas flowing through both Indoor and Outdoor Units. • When operation mode is switched from "COOL" to "HEAT", you may hear a hissing sound coming from the refrigerant circuit. This is the noise of refrigerant caused by flow stop or flow change. • The tone of operating noise changes. This noise is caused by the change of frequency.
Dust comes out of the Indoor Unit.	<ul style="list-style-type: none"> • This happens if the Unit is used again after a long time. During this time, dust has got inside the Unit.
The Indoor Unit gives off bad smells.	<ul style="list-style-type: none"> • The Unit can absorb the smell of rooms, furniture, cigarettes, etc., and then emits it again.
The Outdoor Unit's fan does not spin.	<ul style="list-style-type: none"> • This happens during the system's operation. The speed of the fan is controlled in order to optimize product operation.

TROUBLESHOOTING

Problems deriving from the remote controller

Before starting troubleshooting, please perform the following checks:

It is not possible to change the settings while the air conditioner is operating

WHAT HAPPENS	CHECK	POSSIBLE REASON
The User cannot change the indoor fan speed.	Check if "AUTO" mode is displayed on remote controller.	When operating in "AUTO" mode, the indoor fan speed is automatically set by the electronics.
	Check if "DRY" mode is displayed on remote controller.	When operating in "DRY" mode, the indoor fan speed is automatically set by the electronics.

The transmission indicator on the remote controller does not light up

WHAT HAPPENS	CHECK	POSSIBLE REASON
Signals from the remote controller are transmitted only when "ON/OFF" button is pressed.	Check if TIMER function is active.	Signals from remote controller cannot be transmitted because the appliance is stopped.

Set point temperature is not displayed on remote controller

WHAT HAPPENS	CHECK	POSSIBLE REASON
Set point temperature is not displayed on remote controller.	Check if "FAN" mode has been selected.	Set temperature cannot be set when operating mode is "FAN".

"TIMER" indications displayed on remote controller go off

WHAT HAPPENS	CHECK	POSSIBLE REASON
After a lapse of time, "TIMER OFF" indication disappears from the display.	Check if TIMER OFF function has been set.	The air conditioner automatically stops at set time, and TIMER indication on remote controller goes off.
After a lapse of time, "TIMER ON" indication disappears from the display.	Check if TIMER ON function has been set.	As soon as set time for start has been reached, the air conditioner starts and the displayed time goes off.

The signal receiving tone from Indoor Unit is no more heard

WHAT HAPPENS	CHECK	POSSIBLE REASON
When pressing "ON/OFF" button on remote controller, no receiving tone is heard from Indoor Unit.	Check if remote controller is actually turned to the receiver on the Indoor Unit, and that no obstacles are placed between them.	Turn the remote controller to the receiver on the Indoor Unit, then push "ON/OFF" button.
Remote controller's buttons are not active.		Press "RESET" button.

NOTE: Sometimes, the remote controller may stop operating correctly because of interferences or electromagnetic noise. In this case, it is necessary to remove batteries from the remote controller, possibly eliminate the noise's reason, wait a few minutes and reinsert the batteries in their case. Now operation should be normal.

TROUBLESHOOTING

Problems and possible solutions

The following table shows a series of problems and their possible reasons and solutions. Please carry out the following checks before contacting the Authorized Technical Service.

CONDITION	CAUSES OR CHECK POINTS
Unit does not start.	<ul style="list-style-type: none"> • Check if electric power is available and whether the Unit is correctly connected to the power source. • Check whether the batteries in the remote controller are charged. • If Timer has been set, check if settings are correct.
After an operation stop, the air conditioner does not perform a restart immediately.	<ul style="list-style-type: none"> • This is normal. A protective function (3 minutes delay) is active to avoid damages to the compressor each time the air conditioner must be restarted after a stop condition.
Various noises are emitted from the Indoor Unit.	<ul style="list-style-type: none"> • When Cooling is started or Heating is stopped, a swishing or a gurgling noise may be heard. This noise is generated while the refrigerant is flowing in the air conditioner. • When starting or stopping operation, a cracking noise may be heard. This noise is generated by the Indoor Unit's parts because of temperature changes. • A whooshing noise may be heard when operating mode is changed (from Cooling to Heating or vice versa) and the air conditioner is running. This noise is generated when the refrigerant changes direction inside the refrigerant circuit.
Air does not flow out of the Indoor Unit or airflow speed cannot be changed.	<ul style="list-style-type: none"> • During operation in Dry mode, the fan speed is always set to "LO", to prevent excessive cooling. • During start-up in Heating mode, air does not flow out until the indoor heat exchanger is warm enough to prevent emission of cold air drafts into the room. • During the thawing (de-icing of the outdoor unit heat exchanger), air may not flow.
Cooling/Heating effect is not sufficient to satisfy the user's comfort needs.	<ul style="list-style-type: none"> • The air conditioner could not work efficiently if the air filters are clogged or dirty. • Make sure the room temperature has not yet reached the desired level: compare the room temperature with the set temperature. • Make sure the airflow speed is not set to "LO". • Make sure the air inlet or outlet on both Indoor and Outdoor Units are not blocked by any obstacles. • If the rating power of the air conditioner is not adequate because the room is too wide or the outdoor temperature is too low, add other appliances.
The transmission indicator on the remote controller does not light up at all or dims when sending signals to Indoor Unit.	<ul style="list-style-type: none"> • Make sure the dry batteries (2 batteries, "AAA" type) have enough charge. Replace both batteries with new ones if necessary. • Make sure the batteries are inserted in the right direction with regard to polarity indicated on the remote controller itself.
Misting on the surface of the Indoor Unit.	<ul style="list-style-type: none"> • During operation in Cooling mode. This indicates that the room temperature is already at a very low value.
Steaming from the Outdoor Unit.	<ul style="list-style-type: none"> • During operation in Heating mode. This indicates that de-icing is being performed on the outdoor unit heat exchanger.

TROUBLESHOOTING



CAUTION

Never try to repair the Air Conditioner by yourself

If one of the following malfunctions occur, immediately stop operation, turn off the main switch and contact the Authorized Technical Service:

- You smell something burning.
- **HKEI 275, 365, 515 XS**: Display on Indoor Unit shows the following Error Codes: E0, E1, E2, E3, E4, E5, E6, E7, E8 or P0, P1, P3, P4.
- **HKEI 685 XS**: OPERATION indicator or other indicators flash rapidly (5 times every second) and they do not stop to flash even after disconnecting the system and connecting it again (malfunction does not disappear).
- Remote controller is malfunctioning, or its buttons do not work well.
- A safety device such as a fuse or a breaker frequently actuates.
- Obstacles or water enter the Unit.
- Water leaks from Indoor Unit.
- Other malfunctions are observed.

AUTOMATIC RESTART AFTER A POWER FAILURE

- When a power failure occurs during operation, the air conditioner stops immediately.
- When power is restored, the "OPERATION" lamp on the Indoor Unit starts blinking.
- In particular, the air conditioner will restart automatically after 3 minutes have elapsed since power is restored. This means that it is not required to press the "ON/OFF" button on the remote control.

The settings will be the same as before the blackout.

However, it is necessary to program TIMER again, as in case of a blackout, TIMER settings for automatic start/stop of the air conditioner are cancelled.

CE DECLARATION OF CONFORMITY

We **Termal** Srl - 14, Via della Salute - 40132 Bologna - Italy

DECLARE UNDER OUR SOLE RESPONSIBILITY

that **HOKKAIDO** Products

Indoor Units:

• HKEI 275 XS • HKEI 365 XS • HKEI 515 XS • HKEI 685 XS


Outdoor Units:

• HCKI 275 XS • HCKI 365 XS • HCKI 515 XS • HCKI 685 XS

conform to the following Directives:

- ***EMC Directive 89/336/EEC and its following 92/31 EEC by L.D. No. 476, dated December 4th, 1992.***
- ***LV Directive 73/23 EEC and applied Standards EN 60335-2-40.***

President
Giorgio Giatti



NOTES

This image shows a full page of white paper designed for handwriting practice. It features 20 evenly spaced, horizontal dashed lines that run across the entire width of the page. There are no margins, text, or other markings present.

NOTES

This image shows a full page of a handwriting practice worksheet. It consists of multiple sets of three horizontal dashed lines, providing a guide for letter height and placement. The lines are evenly spaced and extend across the entire width of the page. There is no text or other markings on the paper.

Manufacturer / Costruttore / Fabricant / Fabricante / Hersteller / Fabrikant		HOKKAIDO				
Model Modello Modèle Modelo Modell Modell	Outdoor Unit / Unità Esterna / Unité Extérieure Unidad Externa / Außengerät / Buitenapparaat	HCKI 275 XS	HCKI 365 XS	HCKI 515 XS	HCKI 685 XS	
	Indoor Unit / Unità Interna / Unité Intérieure Unidad Interna / Innengerät / Binnenapparaat	HKEI 275 XS	HKEI 365 XS	HKEI 515 XS	HKEI 685 XS	
Cooling / Raffreddamento / Refroidissement / Frío / Køling / Alleen koeling Energy efficiency class on a scale of A (more efficient) to G (less efficient) Classe di efficienza energetica su una scala da A (bassi consumi) a G (alti consumi) Classement selon son efficacité énergétique sur une échelle allant de A (économe) à G (peu économe) Clase de eficiencia energética en una escala desde A (bajo consumo) hasta G (alto consumo) Energieeffizienzklasse auf einer Skala von A (niedriger Verbrauch) bis G (hoher Verbrauch) Energieefficiëntieklasse op een Schaal van A (efficiënt) tot G (inefficiënt)		A	A	A	A	
Annual energy consumption (kWh) in cooling mode Consumo annuo di energia (kWh) in modalità raffreddamento Consommation annuelle d'énergie (kWh) en mode refroidissement Consumo anual de energía (kWh) en modo Frío Jährlicher Energieverbrauch (kWh) im Kühlbetrieb Jaarlijks Energieverbruik (kWh) in Koelstand		350	525	780	1050	
Cooling output (kW) / Potenza refrigerante (kW) / Puissance frigorifique (kW) Potencia refrigerante (kW) / Kühlleistung (kW) / Koelvermogen (kW)		2.70	3.60	5.10	6.80	
Energy efficiency ratio (EER) at full load Indice di efficienza energetica (EER) a pieno regime Niveau de rendement énergétique (EER) à pleine charge Indice de eficiencia energética (EER) a pleno rendimiento Energie-Effizienz-Schlüssel (EER) bei Vollast-Nutzung Energie-Efficiëntie-Verhouding (EER) volle belastingSchlüssel		3.86	3.43	3.27	3.24	
Type	Cooling only / Solo raffreddamento / Refroidissement seulement / Sólo Frío / Køling / Alleen koeling					
Tipo	Cooling/heating / Raffreddamento/riscaldamento / Refroidissement/chauffage / Frío/Calor / Kühlfunktion/Heizfunktion / Koeling/Verwarming	➡	➡	➡	➡	
Tipo	Air cooled / Raffreddamento ad aria / Refroidissement par air / Frío por aire / Luftkühlung / Luchtgekoeld	➡	➡	➡	➡	
Typ	Water cooled / Raffreddamento ad acqua / Refroidissement par eau / Frío por agua / Wasserkühlung / Watergekoeld					
Type						
Heat output (kW) / Potenza di riscaldamento (kW) / Puissance de chauffage (kW) Potencia de Calor (kW) / Heizleistung (kW) / Verwarming-svermogen		2.95	3.85	5.50	7.25	
Heating / Riscaldamento / Chauffage / Calor / Heizfunktion / Verwarming Energy efficiency class on a scale of A (more efficient) to G (less efficient) Classe di efficienza energetica su una scala da A (bassi consumi) a G (alti consumi) Classement selon son efficacité énergétique sur une échelle allant de A (économe) à G (peu économe) Clase de eficiencia energética en una escala desde A (bajo consumo) hasta G (alto consumo) Energieeffizienzklasse auf einer Skala von A (niedriger Verbrauch) bis G (hoher Verbrauch) Energieefficiëntieklasse op een Schaal van A (efficiënt) tot G (inefficiënt)		A	A	A	A	



ESLAT AS

Välja 35a, Tallinn 10616, Estonia

Tel.: (+372) 6 567 894

Fax: (+372) 6 567 896

Skype: eslat.as

E-mail: info@eslat.ee

Website: www.eslat.ee

Due to on-going technological development of the Products by the Manufacturer, we reserve the right to vary the technical specifications at any time and without notice.