

OPERATING MANUAL

ENGLISH

DC INVERTER
R410A



Before using your air-conditioner, please read this operating instruction carefully and keep it for future reference.

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**Thank you for
purchasing our
Room Air Conditioner.**

Part No.453195300/01

FEATURES AND FUNCTIONS

INVERTER

At the start of operation, a large power is used to bring the room quickly to the desired temperature. Afterwards, the unit automatically switches to a low power setting for economic and comfortable operation

VERTICAL AIR SWING

Automatic swing of supply air in vertical direction. The flap moves automatically in upward and downward direction to spread the conditioned air evenly throughout the room.

Manual positioning of the air flap to provide desirable air flow angle when not supplied automatic swing

WIRELESS REMOTE CONTROL UNIT

The Wireless Remote Control Unit allows convenient control of air conditioner operation.

AUTO CHANGE OVER

The operation mode (cooling, dry, heating) is switched automatically to maintain the set temperature, and the set temperature is kept constant at all times.

ELECTROSTATIC FILTER(Optional)

They are capable of capturing small particles down to 0.1 microns, such as atmospheric and house hold dust, coal dust, insecticide dust, mites, pollen, pet dander, tobacco smoke particles, cooking smoke and grease, mold fungi, bacteria, veruses and more.

SLEEP TIME

When the SLEEP button is pressed during heating mode, the air conditioner's thermostat setting is gradually lowered during the period of operation; throughout cooling mode, the thermostat setting is gradually raised during the period of operation. When the set time is reached, the unit automatically turns off.

OPERATING TEMPERATURE RANGE

| | | Indoor | | Outdoor | |
|---------|-------------|--------|--------|---------|--------|
| | | DB[°C] | WB[°C] | DB[°C] | WB[°C] |
| Cooling | Upper Limit | 32 | 23 | 46 | NA |
| | Lower Limit | 21 | 15 | -10 | NA |
| Heating | Upper Limit | 27 | NA | 24 | 18 |
| | Lower Limit | 10 | NA | -15 | -16 |

IONIZER(Optional)

The IONIZER makes the air more fresh and more comfortable.

Important Notice: When the air-conditioner is turned OFF or if the indoor fan stops operating, the IONIZER automatically stops.

PRECAUTIONS

Danger

This sign warns of death or serious injury.

- Do not attempt to install this air conditioner by yourself.
- This unit contains no user-serviceable parts. Always consult authorized service personnel for repairs.
- When moving, consult authorized service personnel for disconnection and installation of the unit.
- Do not become excessively chilled by staying for lengthy periods in the direct cooling airflow.
- Do not insert fingers or objects into the outlet port or intake grilles.
- Do not start and stop air conditioner operation by disconnecting the power supply cord and so on.
- Take care not to damage the power supply cord.
- In the event of a malfunction (burning smell, etc.), immediately stop operation, disconnect the power supply plug, and consult authorized service personnel.
- If the power supply cord of this appliance is damaged, it should only be replaced by the authorized service personnel, since special purpose tools and specified cord are required.
- The appliance is not intended for use by young children or infirm persons without supervision.
- Pre-heat the air conditioner for at least 12 hours before operation. If used it for a long time, please keep the power on.

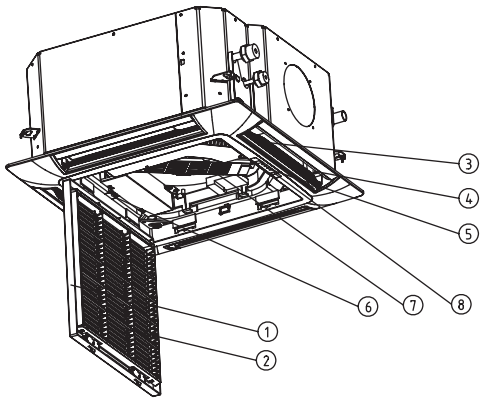
Caution

This sign warns of damage to property.

- Provide occasional ventilation during use.
- Do not direct air flow at fireplaces or heating apparatus.
- Do not climb on, or place objects on the air conditioner.
- Do not hang objects from the indoor unit.
- Do not set flower vases or water containers on top of air conditioner.
- Do not expose the air conditioner directly to water.
- Do not operate the air conditioner with wet hands.
- Do not pull power supply cord.
- Turn off power source when not using the unit for extended periods.
- Check the condition of the installation stand for damage.
- Do not place animals or plants in the direct path of the air flow.
- Do not drink the water drained from the air conditioner.
- Do not use in applications involving the storage of foods, plants or animals, precision equipment, or art works.
- Connection valves become hot during heating; handle with care.
- Do not apply any heavy pressure to radiator fins.
- Operate only with air filters installed.
- Do not block or cover the intake grille and outlet port.
- Ensure that any electronic equipment is at least one metre away from either the indoor or outdoor units.
- Avoid installing the air conditioner near a fireplace or other heating apparatus.
- When installing the indoor and outdoor units, take precautions to prevent access to infants.
- Do not use inflammable gases near the air conditioner.

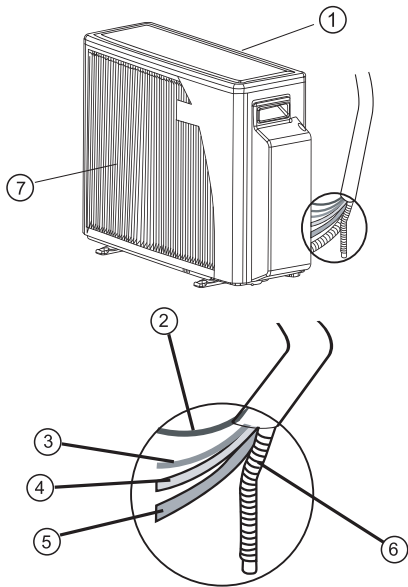
NAME OF EACH PART

INDOOR UNIT



- ① Air intake grille
- ② Air filter
- ③ Supply air flap louver
- ④ Air outlet
- ⑤ Unit's indicators
- ⑥ Ionizer(optional)
- ⑦ Electrostatic filter (optional)
- ⑧ On unit operation

OUTDOOR UNIT

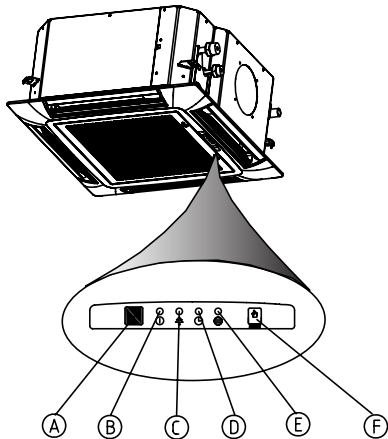


- ① Outdoor unit air intake
- ② Power cable
- ③ Control wire
- ④ Liquid line
- ⑤ Suction line
- ⑥ Drain hose
- ⑦ Outdoor unit air outlet

Note: These instructions also apply if the products differ externally to those appearing in the manual.

NAME OF EACH PART

Unit's indicators and on unit operation



A. Signal receiver

Receive signals from the remote control.

B. Stand-by indicator

Lights up when the units is connected to power and ready to receive the remote control commands.

Operation indicator

Lights up during operations. Blinks when compressor is stopped as a result of a thermodynamic protection.

C. ESF/Ionizer indicator

Lights up during ESF/ ionizer operation.

D. Timer indicator

Lights up during timer and sleep operation.

Blinks when the timer setting is invalid when power failure occurred.

E. Filter indicator

Lights up when air filter requires cleaning.

F. Unit mode button / Reset button

- Used to switch the unit off or to turn it on for cooling or heating without the remote control.
- Press to turn off the filter indicator and to reset the filter function, after the cleaned filter has been reinstalled.
- Press to cancel the buzzer announcer.

If the air-conditioner can not be operated by the Remote Control units, it can be turned on for cooling or heating, or completely turned off, by every short pressing on MODE button (F) on the air-conditioner. The MODE button will change the operating status of the unit between –COOLING – HEATING – STAND BY positions. In long pressing the system enters into diagnostic mode. When the filter indicator is on, turn off the filter indicator after a clean filter has been reinstalled.

OPERATION TIPS

- Set a suitable room temperature; excessively low room temperature is not good for your health and wastes electricity. Avoid frequent setting of the temperature.
- During cooling, avoid direct sun. Keep curtains and blinds closed. Close doors and windows to keep the cool air in the room.
- Avoid generating heat or using of heating appliances while the air conditioner is in cooling mode.
- Make sure that the air flap is positioned properly: horizontal flow from cooling and downward vertical flow for heating.
- Keep the room temperature uniform by adjusting the left/right vertical air blades.
- Position the air flap and the left/right air blades in such a manner as to prevent your body from being exposed directly to air drafts.
- During prolonged operation, ventilate the room occasionally by opening a window from time to time.
- In a power failure, the microprocessor memory is retained. When restarted, operation will be resumed in the last mode of operation. However, if the timer was used, the unit will be turned off by the timer only if the remote control is aimed at the unit. Otherwise the power failure will cause the timer data to be erased from the microprocessor memory.
- After turning on, allow more than 3 minutes for cooling, heating or dry operation to start.
- When DRY mode is used, make sure that the room temperature is between 20°C and 27°C. When used out of this range, the unit may protect itself and become inoperative.
- When COOL or DRY modes are used, make sure that the room's relative humidity is below 78%. If the unit is used for a prolonged periods of time in high humidity, moisture may form on the air outlet and drip down.
- Remote control signals may not be received if the indoor unit controls cover are exposed to direct sunlight or strong light. In such a case, block the sunlight or dim the lighting.
- The remote control is operative in a range of 8 meters. If you are out of range, the remote control may have difficulties in transmitting signals.

PROTECTION MODES(optional)

Your air-conditioner includes several automatic protection modes which enable you to use them virtually at any time and in any season regardless of the outdoor temperature. Some of the protection modes are listed below:

| Mode | Operation conditions | Protection from | Controlled remedy |
|--------------|------------------------------------|---------------------------|---|
| Cool And Dry | Low outdoor temperature | Indoor coil freezes up | Stops outdoor fan and compressor when approaching freezing conditions Resumes operation automatically. Operating indicator blinks |
| | High outdoor temperature | Outdoor coil overheating | Stops compressor when approaching over heating conditions. Resumes operation automatically. Operating indicator blinks |
| Heating | Low outdoor temperature | Outdoor coil ice build up | Reverses operation from heating to cooling for short periods to de-ice outdoor coil. Operating indicator blinks |
| | High Indoor or outdoor temperature | Indoor coil overheating | Stops outdoor fan and compressor when approaching high indoor coil temperature. Resumes operation automatically. Operating indicator blinks |

Note: When switching OFF the unit after heating operation, it may perform outdoor coil deicing operation. In such a case, the compressor will continue to run for some time after the unit is switched OFF, and the indoor unit louvers are closed. This feature is a part of the normal unit operation

CARE AND MAINTENANCE

Only a qualified service technician is allowed to perform the maintenance. When cleaning the filter, make sure the main power should be cut off. Or else fingers touching the electrical parts or rotating fan by mistake can lead to body injury.

CLEANING THE AIR FILTER

To remove the air filters, open the front panel by rotating the 2 locks counterclockwise from horizontal to vertical position, pull out the filters, and clean them by washing in warm soapy water and dry thoroughly. Align and fit the filters in place. Close the panel by rotating the lock to horizontal position.

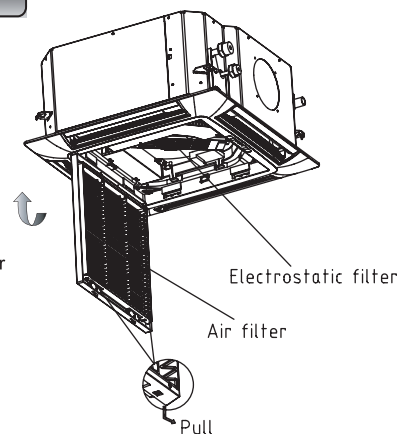
- If your air conditioner is provided with a filter cleaning indicator, a light blinks when filter cleaning is needed. In this case, remove the filters as indicated above, clean them and press the RESET button to turn OFF the indicator.

DO NOT OPERATE THE UNIT WITHOUT FILTERS!

CLEANING THE ELECTROSTATIC FILTER

- The electrostatic filter should be removed from the unit and cleaned once every three months. The procedure is shown as following;

1. Open the front panel
2. Push the hook on the filter and pull out the electrostatic filter
3. Wash the filter with the warm soapy water and dry thoroughly
4. Push the electrostatic filter into the right position
5. Close the front panel



Note: the above procedure is used for cleaning the electrostatic filter. (when supplied)

CLEANING THE AIR CONDITIONER

- Wipe the unit with a soft dry cloth or clean it using a vacuum cleaner.
- Do not use hot water or volatile materials which could damage the surface of the air conditioner.

AT THE BEGINNING OF THE SEASON

- Make sure there are no obstacles blocking the flow of inlet or outlet air, in both indoor and outdoor units.
- Make sure the power is properly connected.

PROTECT THE ELECTRONIC SYSTEM

- Indoor unit and remote control must be at least 1 meter away from a TV, radio or any other home electronic appliance.
- Protect the inner unit from direct sun or lighting.

TROUBLESHOOTING

Before calling for service, please check the following common malfunctions and correct it as needed.

| Problem | Cause | Remedy |
|---|---|---|
| <ul style="list-style-type: none"> Unit does not operate. Stand-by indicator does not light up | <ul style="list-style-type: none"> Unit not connected to power Power failure | <ul style="list-style-type: none"> Plug in the power cord Check main fuse |
| <ul style="list-style-type: none"> Unit does not operate. Stand-by indicator lights. | <ul style="list-style-type: none"> Remote control malfunctions The remote control is locked | <ul style="list-style-type: none"> Check remote control batteries Try to operate from a closer distance Start from on-unit controls Unlock the remote control |
| <ul style="list-style-type: none"> Unit does not respond properly to remote control command | <ul style="list-style-type: none"> IR signal does not reach unit Distance between remote control and unit too large or aimed at from improper angle IR receiver on-unit exposed to strong light source | <ul style="list-style-type: none"> Check for obstruction between unit and remote control. Clear if needed. Get closer to unit. Dim lights, fluorescent especially |
| <ul style="list-style-type: none"> Air does not blow out from indoor unit | <ul style="list-style-type: none"> De-icing protection mode is activated Unit in AUTO FAN mode Over cooling in DRY | <ul style="list-style-type: none"> Normal operation in HEATING mode Normal operation in DRY mode |
| <ul style="list-style-type: none"> COOLING, DRY or HEATING does not start immediately | <ul style="list-style-type: none"> 3-min. Compressor delayed start | <ul style="list-style-type: none"> Normal operation for these modes |
| <ul style="list-style-type: none"> Unit functions but does not perform sufficiently | <ul style="list-style-type: none"> Improper temperature setting Unit capacity insufficient for load or room size | <ul style="list-style-type: none"> Reset temperature Consult your dealer |

EXCEPTION FOR MULTI SPLIT TYPE

In multi split applications where more than a single indoor unit is connected to the same outdoor unit, it may happen that the requested operation mode can not be operated. The reason for this is that the system is currently operating in a different mode. The system operation mode can be either cooling or heating and is set by the outdoor unit controls, based on indoor and outdoor unit settings. The rules for the mode settings may be different from one application to another. In most applications the system operation mode will not be changed as long as there is an operating indoor unit requesting the active mode. The operation mode in such application will be set by the first indoor unit that is turned ON from Stand By.

The following table shows the indoor unit operation modes that can be operated per active system mode:

| | | System Active Mode | |
|--------------------------------------|----------------|--------------------|------------------|
| | | Cooling | Heating |
| Requested indoor unit operation mode | Cooling | v | X |
| | Heating | X | v |
| | Dry | v | X |
| | Auto Cool/Heat | v (cooling only) | v (heating only) |
| | Ventilation | v | X |

(v - enabled indoor unit operation mode, X - disabled indoor unit operation mode)

Indoor unit operation when the requested mode is disabled is as following:

- Louver opens;
- Green (OPER) LED blinks once in two seconds;
- Indoor fan is forced off;