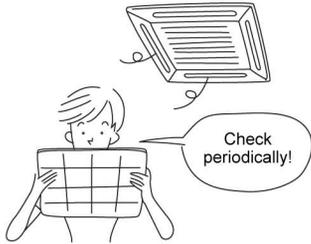


AIR CONDITIONER OPERATIONS AND PERFORMANCE

To save energy and perform comfortable cooling and heating

Clean the air filter often

- A clogged air filter lowers the cooling/heating performance.



Do not cool/heat too much

⚠ WARNING

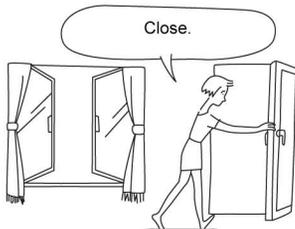
Do not expose your body to cool air directly for a long time and do not cool yourself excessively. Doing so may result in deteriorated physical condition and ill health.

- Cooling/Heating too much is bad for your health. In particular, take care with handicapped/old people and children.



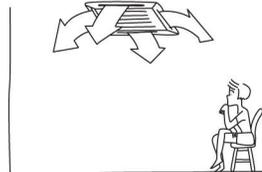
Close windows and doors

- Do not let cooled/heated air escape from the room.



Cool/Heat the room evenly

- Adjust the air direction with the louver. Exposing yourself to blowing air directly for a long time is bad for your health.



Air conditioner operating conditions

For proper performance, operate the air conditioner under the following temperature conditions:

Cooling operation	Outdoor temperature : -5°C to 43°C (Dry-bulb temp.)
	Room temperature : 21°C to 32°C (Dry-bulb temp.), 15°C to 24°C (Wet-bulb temp.)
	[CAUTION] Room relative humidity: less than 80 %. If the air conditioner operates in excess of this figure, the surface of the air conditioner may cause dewing.
Heating operation	Outdoor temperature : -20°C to 15.5°C (Wet-bulb temp.)
	Room temperature : 15°C to 28°C (Dry-bulb temp.)

If air conditioner is used outside of the above conditions, safety protection may operate.

MAINTENANCE

⚠ WARNING

For daily maintenance including Air Filter cleaning, make sure to ask the qualified service person particularly following models as the maintenance requires high-place work;

- 4-way cassette type
- Compact 4-way cassette type
- 2-way cassette type
- 1-way cassette type
- Under ceiling type
- Concealed duct standard type
- Concealed duct high static type
- Slim duct type
- Fresh air intake type

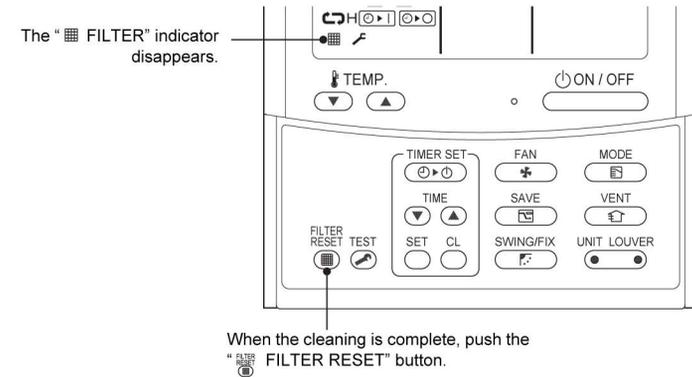
⚠ CAUTION

Do not push buttons with wet hands.

Doing so may result in electric shock.

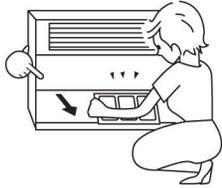
Cleaning the air filters

- When the filter indicator is displayed on the remote controller, clean the air filters.
- Ask qualified service person to clean the filters for the models listed in the warning on the top of this chapter.
- Clogged filters may lower the cooling and heating performance.



◆ Floor standing cabinet type

- 1 Push down the upper part of the return air grille slightly, and then pull it toward you to remove it.
- 2 Take out the air filter inside the return air grille.



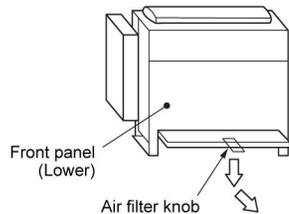
3 Vacuum dust or brush clean.

- If heavily stained, it is more effective to wash in lukewarm water mixed with neutral detergent.
- After washing, rinse it well, and dry it in the shade.
- Reinstall the cleaned air filter.



◆ Floor Standing Concealed Type

- 1 Push down hook of the air filter on the front panel (Lower side).
- 2 Pull the air filter toward you to remove it.



3 Vacuum dust or brush clean.

- If heavily stained, it is more effective to wash in lukewarm water mixed with neutral detergent.
- After washing, rinse it well, and dry it in the shade.
- Reinstall the cleaned air filter.



◆ Floor standing type

1 Remove the air filter.

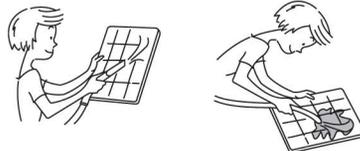
- Pull down the air filter toward you.



- To attach the air filter, insert it into the unit and push it in.

2 Vacuum dust or brush with water.

- If heavily stained, it is more effective to wash in lukewarm water mixed with neutral detergent.



- After washing, rinse it well, and dry it in the shade.

3 Vacuum dust or brush clean.

- If heavily stained, it is more effective to wash in lukewarm water mixed with neutral detergent.
- After washing, rinse it well, and dry it in the shade.
- Reinstall the cleaned air filter.



■ Cleaning the indoor unit and remote controller

- Ask qualified service person to clean the indoor units for the models listed in the warning on the top of this chapter.
- Wipe with a dry, soft cloth.
- If heavily stained, wipe off dirt with a cloth soaked in lukewarm water.
(Do not use water to wipe the remote controller)
- Do not use benzine, thinner, scouring powder, chemical cloth, etc. as those may cause deformation or breakage.



■ If unused for over a month

- Leave the fan on for half a day or so to dry the inside.
- Turn off the main power switch.
- Clean the air filter and then attach it.

■ Periodic inspection

- After being used for a long period of time, the parts may deteriorate or malfunction, or the drainage may worsen, due to heat, moisture, dust, or general usage.
- In addition to the maintenance, it is recommended that you have a inspection (charges apply) performed by the dealer where you purchased the unit, etc.

⚠ CAUTION

4-way air discharge cassette type

- **Perform high-pressure cleaning for the heat exchanger.**

If commercially available detergent (strong alkaline or acid cleaning agent) is used, the surface treatment of the heat exchanger will deteriorate, which may degrade the self cleaning performance. For details, contact our sales department or the dealer where you purchased the unit.

■ Before the cooling season

Ask a qualified service person to clean the drain pan

⚠ CAUTION

Clean the drain pan

Without cleaning, the drain pan may be filled with waste, and water may overflow onto the ceiling or floor.

If you do not plan to use the unit for more than 1 month

- (1) Operate "FAN" mode.
Run the fan for about half a day to dry the inside fully.
- (2) Stop the air conditioner and turn off the main power switch.



Checks before operation

- (1) Check that the air filters are installed.
- (2) Check that the air outlet or inlet is not blocked.
- (3) Turn on the main power switch.

WHEN THE FOLLOWING SYMPTOMS ARE FOUND

Check the points described below before asking repair servicing.

	Symptom	Cause
It is not a failure.	Outdoor unit <ul style="list-style-type: none"> White misty cold air or water is out. Sometimes, noise of air leak is heard. 	<ul style="list-style-type: none"> Fan of the outdoor unit stops automatically and performs defrost operation. Solenoid valve works when defrost operation starts or finishes.
	Indoor unit <ul style="list-style-type: none"> "Swish" sound is heard sometimes. Slight clacking sound is heard. Discharge air smells. "Ⓜ" indication is lit. "Ⓢ" indication is lit. "Ⓠ" indication is lit. Sound or cool air is output from the stand by indoor unit. 	<ul style="list-style-type: none"> When the operation has started, during the operation, or immediately after the operation has stopped, a sound such as water flows may be heard, and the operation sound may become larger for 2 or 3 minutes immediately after the operation has started. They are flowing sound of refrigerant or draining sound of dehumidifier. This is sound generated when heat exchanger, etc. expand and contract slightly due to change of temperature. Various smell such as one of wall, carpet, clothes, cigarette, or cosmetics adhere to the air conditioner. When cooling operation cannot be performed because another indoor unit performs heating operation. Is outdoor temperature out of operation temperature range? When the manager of the air conditioner has fixed the operation to COOL or HEAT, and an operation contrary to the setup operation is performed. When stopping the fan to prevent cool air blow at starting heating. Since refrigerant is flowed temporarily to prevent stay of oil or refrigerant in the stand by indoor unit, sound of flowing refrigerant, may be heard or white steam when other indoor unit operates in HEAT mode, and cold air in COOL mode may be blow-out. Sound is generated when the expansion valve operates when power has been turned on. LCD may temporarily blur by static electricity. Intermittent operation of the fan with louvers open is sometimes carried out for the refrigerant recovery control of unoperated unit.
Check again.	Operates or stops automatically.	Is the timer "ON" or "OFF"?
	Does not operate.	<ul style="list-style-type: none"> Is it a power failure? Is the power switch turned off? Is the power fuse or breaker blown? Has the protective device operated? (The operation lamp goes on.) Is the timer "ON"? (The operation lamp goes on.) Are COOL and HEAT selected simultaneously? ("Ⓜ" indication is lit on the display of the remote controller.) Is outdoor temperature out of operation temperature range?
	Air is not cooled or warmed sufficiently.	<ul style="list-style-type: none"> Is the air inlet or air outlet of the outdoor unit obstructed? Are any door or window open? Is the air filter clogged with dust? Is discharge louver of the indoor unit set at appropriate position? Is air selection set to "LOW" "MED", and is the operation mode set to "FAN"? Is the setup temp. the appropriate temperature? Are COOL and HEAT selected simultaneously? ("Ⓜ" indication is lit on the display of the remote controller.) Is outdoor temperature out of operation temperature range?

⚠ CAUTION

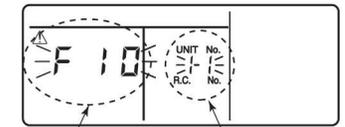
If any of the following conditions occur, turn off the main power supply switch and immediately contact the dealer:

- Switch operation does not work properly.
- The main power fuse often blows out, or the circuit breaker is often activated.
- A foreign matter or water fall inside the air conditioner.
- When the air conditioner does not operate even after the cause of the protective device activation has been removed. (The operation lamp and ⚡ on the remote controller are flashing. When ⚡ and a combination of E, F, H, L, or P and a number are displayed on the remote controller, also inform a qualified service person of the display content.)
- Any other unusual conditions are observed.

Confirmation and check

When a trouble occurred in the air conditioner, the check code and the indoor unit No. appear on the display part of the remote controller.

The check code is only displayed during the operation. If the display disappears, operate the air conditioner according to the following "Confirmation of error history" for confirmation.

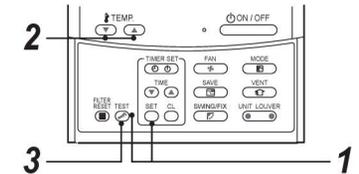


Check code Indoor unit No. in which an error occurred

Confirmation of error history

When a trouble occurred on the air conditioner, the trouble history can be confirmed with the following procedure. (The trouble history is stored in memory up to 4 troubles.)

The history can be confirmed from both operating status and stop status.



Procedure	Description
1	When pushing SET and TEST buttons at the same time for 4 seconds or more, the following display appears. If [⚡ Service check] is displayed, the mode enters in the trouble history mode. <ul style="list-style-type: none"> [01 : Order of trouble history] is displayed in CODE No. window. [Check code] is displayed. [Indoor unit address in which an error occurred] is displayed in UNIT No..
2	Every pushing of [⏴ / ⏵] button used to set temperature, the trouble history stored in memory is displayed in order. The numbers in CODE No. indicate CODE No. [01] (latest) to [04] (oldest). <p>CAUTION</p> Do not push DEL button because all the trouble history of the indoor unit will be deleted.
3	After confirmation, push TEST button to return to the usual display.

- Check the troubles according to the above procedure.
- Ask an authorized dealer or qualified service (maintenance) professional to repair or maintain the air conditioner.
- More details of the check code are explained in Service Manual.