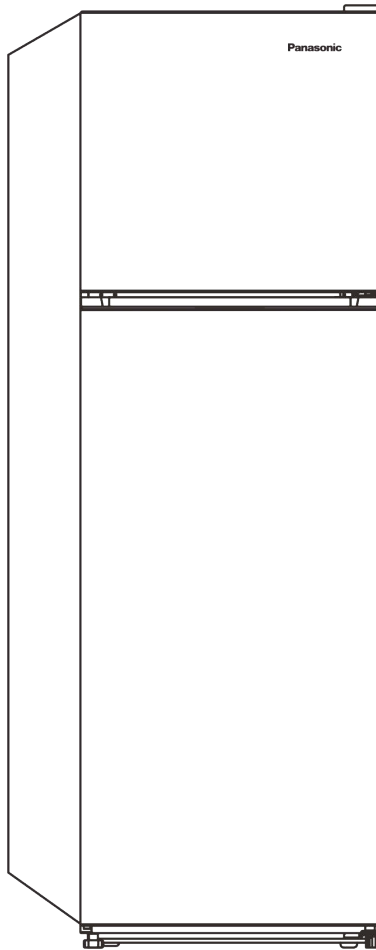


Panasonic

FROST-FREE REFRIGERATOR-FREEZER

INSTRUCTION MANUAL

Model No.: NR-TC221BUSA



Dear users, this manual contains the product's basic knowledge, how to use it, fault diagnosis and basic troubleshooting methods. In order to better understand and use this product, please take good care of this manual and read it carefully.

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SAFETY



WARNING!

It is hazardous for anyone other than authorized service personnel to carry out servicing or repairs which involves the removal of covers. To avoid the risk of an electric shock do not attempt to repair this appliance yourself.

WARNING!

Risk of fire / flammable materials.



Safety tips

Do not use electrical appliances such as a hair dryer or heater to defrost your Fridge/Freezer.

Containers with flammable gases or liquids can leak at low temperatures.

Do not store any containers with flammable materials, such as spray cans, fire extinguisher refill cartridges etc. in the Fridge/Freezer.

Do not place carbonated or fizzy drinks in the Freezer compartment. Ice blocks can cause "Frost/Freeze burns". If consumed straight from the Fridge/Freezer.

Do not remove items from the Fridge/Freezer compartment if your hands are damp/wet, as this could cause skin abrasions or "Frost/Freezer burns". Bottles and cans must not be placed in the Freezer compartment as they can burst when the contents freeze.

Manufacturer's recommended storage times should be adhered to. Refer to relevant instructions.

Do not allow children to tamper with the controls or play with the Fridge/Freezer. The Fridge/Freezer is heavy. Care should be taken when moving it. It is dangerous to alter the specification or attempt to modify this product in any way.

Do not store inflammable gases or liquids inside your Fridge/Freezer.

If the power cable is damaged, it must be replaced by the manufacturer, a service agent or similarly qualified persons to avoid a hazard.

This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

This refrigerating appliance is not intended to be used as a built-in appliance.

This appliance is intended to be used in household and similar applications such as

- staff kitchen areas in shops, offices and other working environments;
- farm houses and by clients in hotels, motels and other residential type environments;
- bed and breakfast type environments;
- catering and similar non-retail applications.

Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstructions.

Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

Do not damage the refrigerant circuit.

Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of type recommended by the manufacturer.

Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.

This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

– **WARNING:** Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.

– **WARNING:** Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

– **WARNING:** Do not damage the refrigerant circuit.

– **WARNING:** Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer.

– **WARNING:** Refrigerating appliances – in particular a refrigerator-freezer Type I – might not operate consistently (possibility of defrosting of contents or temperature becoming too warm in the frozen food compartment) when sited for an extended period of time below the cold end of the range of temperatures for which the refrigerating appliance is designed;

– **WARNING:** It is necessary that, for doors or lids fitted with locks and keys, the keys be kept out of the reach of children and not in the vicinity of the refrigerating appliance, to prevent children from being locked inside.

– **WARNING:** The refrigerant used in your appliance and insulation materials requires special disposal procedures.

– **WARNING:** When positioning the appliance, ensure the supply cord is not trapped or damaged.

– **WARNING:** Do not use multiple portable socket-outlets or portable power supplies at the rear of the appliance

To avoid contamination of food, please respect the following instructions:

– Opening the door for long periods can cause a significant increase of the temperature in the compartments of the appliance.

– Clean regularly surfaces that make contact with food and accessible drainage systems.

–

– Store raw meat and fish in suitable containers in the refrigerator, so that it is not in contact with or drip onto other food.

– Four-star frozen-food compartments are suitable for storing pre-frozen food, storing or making ice-cream and making ice cubes.

– One-, two- and three-star compartments are not suitable for the freezing of fresh food.

– If the refrigerating appliance is left empty for long periods, switch off, defrost, clean, dry, and leave the door open to prevent mould developing within the appliance.

Electrical Connection

⚡WARNING⚡

This appliance should be properly grounded for your safety. The power cord of this appliance is equipped with a three-prong plug which matches with the standard three prong wall outlets to minimize the possibility of electrical shock. Do not, under any circumstances, cut or remove the third ground prong from the power cord supplied.

This refrigerator appliance requires a standard 220-240VAC 50/60Hz electrical outlet with three-prong ground.

This refrigerator appliance is not designed to be used with an inverter.

The cord should be secured behind the appliance and not left exposed or dangling to prevent accidental injury.

Never unplug the refrigerator by pulling the power cord. Always grip the plug firmly and pull straight out from the receptacle.

Do not use an extension cord with this appliance. If the power cord is too short, have a qualified electrician or service technician install an outlet near the appliance. Use of an extension cord can negatively affect the performance of the unit. Improper use of the grounded plug can result in the risk of electrical shock. If the power cord is damaged, have it replaced by an authorized service center.

Climate Range

The information about the climate range of the appliance is provided on the rating plate. It indicates at which ambient temperature (that is, room temperature, in which the appliance is working) the operation of the appliance is optimal (proper).

Climate range	Permissible ambient temperature
---------------	---------------------------------

SN	from +10°C to +32°C
N	from +16°C to +32°C
ST	from +16°C to +38°C
T	from +16°C to +43°C

Note: Given the limit values of the ambient temperature range for the climate classes for which the refrigerating appliance is designed and the fact that the internal temperatures could be affected by such factors as location of the refrigerating appliance, ambient temperature and the frequency of door opening, the setting of any temperature control device might have to be varied to allow for these factors, if appropriate.

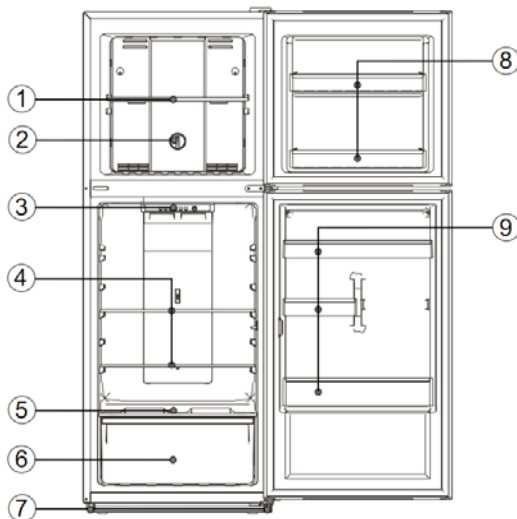
Locks

If your Refrigerator is fitted with a lock, keep the key out of reach and not in the vicinity of the appliance to prevent children being entrapped. When disposing of an old Refrigerator, break off any old locks or latches as a safeguard.

Freon-free

The freon-free refrigerant (R600a) and the foaming insulation material (cyclopentane) that is environmentally friendly are used for the refrigerator, causing no damage to the ozone layer and having a very small impact on the global warming. R600a is flammable, and sealed in a refrigeration system, without leakage during normal use. But, in case of refrigerant leakage due to the refrigerant circuit being damaged, be sure to keep the appliance away from open flames and open the windows for ventilation as quickly as possible.

Product Features



No	Description
1	Freezer Shelf
2	Thermostat knob
3	Control panel
4	Refrigerator Shelves
5	Crisper Cover
6	Vegetable Crisper
7	Adjustable Feet
8	Freezer Racks
9	Refrigerator Racks

Due to technological innovation, the descriptions of the product in this manual may not be completely consistent with your refrigerator. Details are in accordance with the material item.

Specifications :

Description	Refrigerator-Freezer
Model	NR-TC221BUSA
Annual energy consumption (AEC)	180 kWh/year
Freezing capacity	2.6kg/24h
Climate class	SN/N/ST/T
Rated voltage	220-240V
Rated frequency	50/60Hz
Rated current	1.13AMPERES
Defrosting power	160W
Refrigerant charge	R600a/39g
Rated storage volume	202L
Volume of fresh food	148L
Volume of freezer	54L
Foaming Agent	CYCLOPENTANE

Classification of protection against electric shock	Class I
Net Weight	42kg

Preparations for use

Installation location

1. Ventilation condition

The position you select for the refrigerator installation should be well-ventilated and has less hot air. Do not locate the refrigerator near a heat source such as cooker, boiler, and avoid it from direct sunlight, thus guaranteeing the refrigeration effect while saving energy consumption. Do not locate the refrigerator in the damp place, to prevent the refrigerator from rusting and leaking electricity. The result of the total space of the room in which the refrigerator is installed being divided by the refrigerant charge amount of the refrigerator shall not be less than $1\text{m}^3(\text{space})/8\text{g}(\text{refrigerant})$.

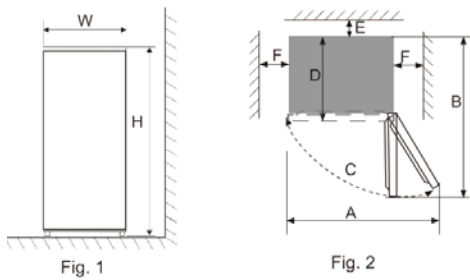
Note: The amount of refrigerant charged for the refrigerator can be found on the nameplate.

2. Heat dissipation space

When working, the refrigerator gives off heat to surroundings. Therefore, at least 20mm of free space should be spared at the top side, more than 25mm on both sides, and above 50mm at the back side of the refrigerator.

Dimensions in mm

W	D	H	A	B	C(°)	E	F
545	590	1465	845	1095	125±5	50	25



Note: Figure 1, Figure 2 only as a product space demand size schematic diagram.

Level ground

Place the refrigerator on the solid and flat ground (floor) to keep it stable, or else, it will give rise to vibration and noise. When the refrigerator is placed on such flooring materials as carpet, straw mat, polyvinyl chloride, the solid backing plates should be applied underneath the refrigerator, to prevent color change due to heat dissipation.



Unobstructed ventilation shall be maintained around the appliance or in an embedded structure.

Preparations for use

1. Standing time

After the refrigerator is properly installed and well cleaned, do not switch it on immediately. Make sure to power the refrigerator after standing for more than 1 hour, to ensure its normal operation.

2. Cleaning

Confirm the accessory parts are inside the refrigerator and wipe the inside with a soft cloth.

3. Power-on

Insert the plug into the solid socket to start the compressor. After 1 hour, open the freezer door, if the temperature inside the freezer compartment drops obviously, it indicates the refrigeration system is working normally.

4. Storage of food

After the refrigerator runs for a period, the internal temperature of the refrigerator will be automatically controlled according to the user's temperature setting. After the refrigerator is fully cooled, put in foods, which usually need 2~3 hours to be fully cooled. In summer, when the temperature is high, it takes more than 4 hours for the foods to be fully cooled (Try to open the refrigerator door as less as possible before the internal temperature cools down).



If the refrigerator is installed in the moisture place, make sure to check whether the ground wire and leakage circuit breaker are normal. If vibration noises are produced due to the refrigerator contacting the wall or if the wall gets blackened by air convection around the compressor, move the refrigerator away from the wall. Setting up the refrigerator may cause jamming noises to the mobile phone, fixed-line telephone, radio receiver, television set surrounding it, so try to keep the refrigerator as far away as possible in such case.

Functions

When the refrigerator is connected to the power supply for the first time, all indicators on the control panel are on for 2 seconds, and after that it runs at Mode 3 by default.


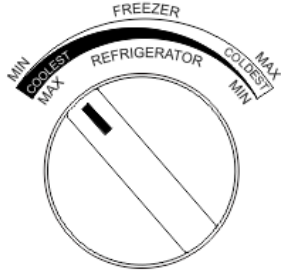

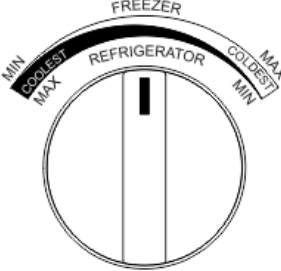

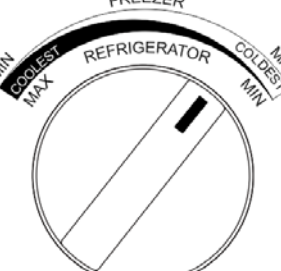


1 Function

1.1 Temperature setting

Press the "SET" key to adjust the temperature, and if no key operation within 5s after the desired temperature mode is set, it will take effect, and the refrigerator is controlled to run at such mode immediately thereafter.

The temperature modes cycles in the following sequence: "3-2-1-Fast cool-5-4-3".

Use environment	Recommended control panel settings	Recommended thermostat knob settings	Special tips
Higher than 35°C			<p>1) The middle mode is recommended.</p> <p>2) Adjust the mode by reference to the recommended settings in the left tables in case of change to the refrigerator surrounding ambient temperature.</p>
16°C-35°C			
Lower than 16°C			

1.2 "FAST COOL"

Under the "Fast Cool" mode, the fridge temperature cools down in a fast manner, and the freezer temperature also drops quickly, so that the stored foods are kept fresh without nutrient loss. The "fast cool" mode keeps running for at most 30

hours after the setting, after which, it will exit automatically, with the temperature mode restored to the setting before the Fast Cool function is enabled.

1.3 Door open alarm

If the fridge door is open for more than 3 minutes, buzzer alarms will be continuously issued, which can be stopped when the set key is pressed, but will be restored after 3 minutes if the door keeps open. The alarms will not be lifted until the door is closed.

1.4 Power cut memory

In case of power failure, the refrigerator will maintain the operating state before power failure when power supply is restored.

1.5 Power-on delay

To protect the refrigerator compressor from being damaged in the case of short-time power failure (i.e., less than 5 minutes), the compressor will not be started immediately after it is powered on.

1.6 Fault alarm

When the indicator light of Mode 5 or Mode3 or Mode 1 keeps flashing, it indicates fault with the refrigerator. Please contact the customer support.

Tips:

1. When the ambient temperature around the refrigerator is higher than 35 °C, do not set the fridge and freezer at the coldest mode, so as not to affect the normal refrigeration of the refrigerator.
2. Also, do not set the fridge at the coldest mode, or adjust the freezer thermostat knob switch to the leftmost position, to avoid the refrigerator compartment undercooling.
3. If the refrigerator temperature is not cool or undercooled, set the fridge at the middle mode, and adjust the freezer thermostat knob switch to the middle position.

Note: During the actual use, icing may occur to the freezer compartment due to high humidity or frequent opening of the door. In such case, do not adjust the thermostat knob switch by force; instead, you are recommended to use a hot towel to heat it locally, so that the knob switch gets thawed before being adjusted to avoid damage.

Instructions for food storage

Precautions for use

- The appliance might not operate consistently (there is possibility of defrosting or temperature becomes too warm in the frozen food compartment) when set for an extended period of time below the cold limit of the temperature range for which the refrigerating appliance is designed
- The information of climate type of the appliance is provided on the rating plate.
- The internal temperature could be affected by such factors as the location of refrigerating appliance, ambient temperature, and frequency of door open, etc., and if appropriate, a warning that setting of any temperature control device might have to be varied to allow for these factors should be made.
- Fizzy drinks should not be stored in the freezer compartment or the low-temperature compartment, and some products such as ice blocks should not be consumed too cold.

Food storage location

Due to the cold air circulation in the refrigerator, the temperature of each area in the refrigerator is different, so different kinds of food should be placed in different areas.

The fresh food compartment is suitable for the storage of such foods as need not to be frozen, the cooked food, beer, eggs, some condiments that need cold preservation, milk, fruit juice, etc. The crisper box is suitable for the preservation of vegetables, fruits, etc.

The freezer compartment is suitable for the storage of ice cream, frozen food, and the foods to be preserved for a long time.

Use of the fresh food compartment

Set the temperature of the fresh food storage compartment between 2 °C ~ 5 °C, and store the foods that are intended for short-term storage, or to be eaten at any time in the fresh food compartment.

Fridge shelf: When removing the shelf, lift it up first, and then pull it out; and when installing the shelf, place it into position before putting it down. (For the two-section shelf, push the first section to the rear end, and then pull the second section out). Keep the shelf rear flange upward, to prevent foods from contacting the liner wall. When taking out or putting in the shelf, hold it firmly, and handle with care to avoid damage.

Crisper box: Pull out the crisper box for access to food. After using or cleaning the cover plate of the crisper box, be sure to put it back onto the crisper, so that the internal temperature of the crisper box will not be affected.

Cautions for food storage

Clean the foods and wipe them dry before storing them inside the refrigerator. Before foods are put in the refrigerator, it is advisable to seal them up, to prevent water evaporation to keep fresh fruits and vegetables and prevent odours.

Do not put too many or too much heavy foods inside the refrigerator. Keep enough space between foods; if too close, the

cold air flow will be blocked, affecting the refrigeration effect. Do not store excessive or overweight foods, to avoid the shelf from being crushed. When storing the foods, keep a distance away from the inner wall; and do not place the water-rich foods too close to the fridge rear wall, they may get frozen on the inner wall.

Categorized storage of foods: Foods should be stored by category, with the foods you eat every day placed in front of the shelf, so that the door open duration can be shortened and food spoilage due to expiration can be avoided.

Energy-saving tips: Allow hot food to cool down to the room temperature before putting it in the refrigerator. Put the frozen food in the fresh food compartment to thaw, using the low temperature of the frozen food to cool the fresh food, saving energy.

Storage of fruits and vegetables

In the case of refrigerating appliances with chill compartment, some types of fresh vegetables and fruits are sensitive to cold and therefore are not suitable for storage in this kind of compartment.

Use of the frozen food storage compartment

The freezer temperature is controlled below $-18\text{ }^{\circ}\text{C}$, and it is advisable to store the food for long-term preservation in the freezer compartment, but the storage duration indicated on the food packaging should be adhered to.

The freezer drawers are used to store food that needs to be frozen. Fish and meat of large sizes should be cut into small pieces and packed into fresh-keeping bags before they are evenly distributed inside the freezer drawers.

- ★ Allow hot foods to cool down to the room temperature before putting them in the freezer compartment.
- ★ Do not put a glass containers with liquid or canned liquid that is sealed in the freezer compartment, to avoid bursting due to volume expansion after the liquid gets frozen.
- ★ Divide the food into appropriately small portions
- ★ Pack food up before freezing it, and the packing bag used should be dry, in case the packing bags are frozen together. Foods should be packed or covered by such suitable materials as are firm, tasteless, impervious to air and water, non-toxic and pollution-free, to avoid cross-contamination and transfer of odour.

Other considerations for operation

Moving the refrigerator/freezer

•Location

Do not place your refrigerator/freezer near a heat source, e.g. cooker, boiler or radiator. Avoid placing it in direct sunlight outside or in conservatories.

•Leveling

Make sure to level your refrigerator/freezer using the front leveling feet. If not level, the refrigerator/freezer door gasket sealing performance will be affected, or even it may lead to the operating failure of your refrigerator/freezer.

After locating the refrigerator/freezer in position, wait for at least 1 hour before using it, to allow the refrigerant to settle.


•Installation

Do not cover or block the vents or grilles of your appliance.

When you are out for a long time

- If the appliance will not be used for several months, turn it off first, and then unplug the plug from the wall outlet.
- Take out all foods.
- Clean and dry the interior thoroughly. To prevent odour and mold growth, leave the door ajar: block it open or have the door removed if necessary.
- Keep the cleaned appliance in a dry, ventilated place and away from the heat source, place the appliance evenly, and do not place heavy objects on top of it.
- The unit should not be accessible in places children play.

Maintenance and cleaning

 **Before cleaning, unplug the power plug first; Do not plug in or pull the plug out with wet hands, because there is a risk of electric shock and injury. Do not spill water directly on the refrigerator, to avoid rust, electricity leakage and accidents. Do not put your hands into the bottom of the refrigerator, since you might be scratched by sharp metal corners.**


Internal cleaning and external cleaning

Food residuals in the refrigerator are liable to produce a bad odour, the refrigerator must be cleaned regularly. The fresh food compartment should be cleaned once a month.

Remove all shelves, crisper box, bottle racks, , and drawers etc., and clean them with a soft towel or sponge dipped in warm water or neutral detergent.

Clear off the dust accumulated on the rear panel and side plates of the refrigerator often.

After using detergent, be sure to rinse it with clean water, and then wipe it dry.

 **Do not use bristle brush, steel wire brush, detergent, soap powder, alkaline detergent, benzene, gasoline, acid, hot water and other corrosive or soluble items to cleanse the cabinet surface, door gasket, plastic decorative parts, etc., to avoid damage.**

Carefully wipe dry the door gasket, clean the groove using a damp cloth. After the cleaning, fix the four corners of the door gasket first, and then embed it segment by segment into the door groove.

Interruption of power supply or failure of the refrigerating system

- Take care of frozen foods in the event of an extended non-running of the refrigerating appliance (such as interruption of power supply or failure of the refrigerating system).
- Try to open the refrigerator door the least amount possible, in this way can food safely and freshly kept for hours even in hot summer.
- If you get the power outage notice in advance:
 - 1) Adjust the thermostat knob to the high mode an hour in advance, so that foods get fully frozen (Do not store new food during this time!). Restore the temperature mode to the original setting when power supply becomes.
 - 2) You can also make ice with a watertight container, and put it in the upper part of the freezer, so as to extend the time for fresh food to be stored.



Note: Once the refrigerator is used, use it continuously; and under normal circumstance, do not stop its use, so as not to affect the service life.

Defrosting

This appliance is designed with automatic defrosting function, there is no need to defrost it manually.

Changing the lamp

The LED lamp is used by the refrigerator for lighting, which features low energy consumption and long service life. In case of any abnormality, please contact customer service. The lamps can only be replaced by the manufacturer.

Safety-check after maintenance

Is the power cord broken or damaged?

Is the power plug firmly inserted into the socket?

Is the power plug abnormally overheated?



Note: Electric shock and fire accident may be caused when the power cord and plugs are damaged or covered by dust. If any abnormality, please unplug the power plug and get in contact with customer support.

Troubleshooting

Regarding the following small faults, not every failure needs to be fixed by a technical service personnel; below are ways you can try to solve the problem.

Case	Inspection	Solutions
• Not cooling	<ul style="list-style-type: none"> • Is power off? • Are breakers and fuses broken? • No electricity or line trip? • Where is the refrigerator installed? • Is it placed in balconies, garages, storage rooms and other places where the ambient temperature is below 10°C? 	<ul style="list-style-type: none"> • Re-plug in the power • Open the door and check whether the lamp is lit. • Install refrigerator in a location that is protected and the ambient temperature is above 10 °C. If your refrigerator is installed in too low temperature, the internal cooling system may not work correctly.
• Abnormal noise	<ul style="list-style-type: none"> • Is refrigerator stable and level? • Does refrigerator touch the wall? 	<ul style="list-style-type: none"> • Adjust the refrigerator's adjustable feet. • Move it off the wall.
• Poor refrigerating efficiency	<ul style="list-style-type: none"> • Do you put hot food or too much food inside? • Do you open the door frequently? • Do you trap food bags to the seal of door? • Installed in direct sunlight or near a stove? • Is it well-ventilated? • Is the temperature setting in too high? 	<ul style="list-style-type: none"> • Put food into refrigerator when hot food becomes cool. • Check and close the door. • Remove the refrigerator from the heat source. • Increase the distance from walls to maintain good ventilation. • Set the appropriate temperature.
• Peculiar smell in refrigerator	<ul style="list-style-type: none"> • Any spoiled food? • Do you need to clean refrigerator? • Do you store food of strong odours? 	<ul style="list-style-type: none"> • Throw away spoiled food. • Clean the refrigerator. • Seal food of strong odours.
Fridge LED light is Off	<ul style="list-style-type: none"> • Is there a door open alarm? • Is the door open for over 10 minutes? 	<p>If door open alarm is sounding, close the door, wait for 5s before opening it again, observe whether the fridge LED light turns on.</p>



Note: If the above descriptions are inapplicable to troubleshooting, do not disassemble and repair it yourself. Repairs carried out by inexperienced persons may cause serious malfunction, injury or death. Contact the local store where your purchase was made. This product should be serviced by an authorised service person and only genuine spare parts should be used.

When the appliance is not in use for long periods, disconnect from the electricity supply, empty all foods and clean the appliance, leaving the door ajar to prevent unpleasant smells.

Certifications

Electrical information

This electrical appliance must be grounded

This product is equipped with a plug, which is suitable for all houses equipped with sockets meeting the current specifications

If the fitted plug is not suitable for your socket outlets, it should be cut off and carefully disposed of. To avoid a possible shock hazard, do not insert the discarded plug into a socket.

This product complies the EEC directives.


Safe recovery instructions

Disposal

Old appliances still have some surplus value. An environmentally friendly approach will ensure that valuable raw materials are recycled.

The refrigerants used in your equipment and insulation materials require special handling procedures. Make sure there is no pipe damage on the back of the equipment before handling.

Up-to-date information on the options for disposing of old equipment and packaging from old equipment can be obtained from the local municipal office.

Correct Disposal of this product	
	This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.