





BOTTOM FREEZER REFRIGERATOR

Read this owner's manual thoroughly before operating the appliance and keep it handy for reference at all times.

ENGLISH

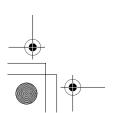
LBNC12231* / LBNC12241* / LBNC12251*



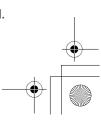
MFL71400030 Rev.05_111620

www.lg.com

Copyright © 2019-2020 LG Electronics Inc. All Rights Reserved.









2



3 IMPORTANT SAFETY INSTRUCTIONS

- 3 READ ALL INSTRUCTIONS BEFORE USE
- 3 WARNING
- 6 CAUTION

7 PRODUCT OVERVIEW

7 Product Features

10 INSTALLATION

- 10 Before Installing
- 11 Choosing the Proper Location
- 12 Reversing Doors and Leveling
- 13 Turning on the Power

14 OPERATION

- 14 Before Use
- 15 Control Panel
- 16 Sabbath Mode
- 16 Water Dispenser
- 17 Storing Food
- 19 Humidity Controlled Crispers
- 20 Refrigerator Shelves
- 20 Door Bins

21 SMART FUNCTIONS

- 21 LG ThinQ Application
- 21 Smart Diagnosis

22 MAINTENANCE

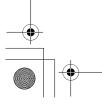
22 Cleaning

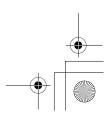
23 TROUBLESHOOTING

- 23 FAQs
- 23 Before Calling for Service

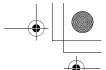
29 LIMITED WARRANTY

- 29 USA
- 33 CANADA









IMPORTANT SAFETY INSTRUCTIONS

READ ALL INSTRUCTIONS BEFORE USE

Safety Messages

Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and follow all safety messages.



This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or injure you and others. All safety messages will follow the safety alert symbol and either the word WARNING or CAUTION.

These words mean:



WARNING

You may be killed or seriously injured if you do not follow instructions.



You may be injured or cause damage to the product if you do not follow instructions.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what may happen if the instructions are not followed.

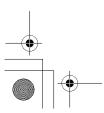
WARNING

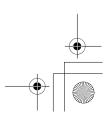
WARNING

To reduce the risk of explosion, fire, death, electric shock, scalding or injury to persons when using this product, follow basic precautions, including the following:

Installation

- To reduce the risk of injury to persons, adhere to all industry recommended safety procedures including the use of long-sleeved gloves and safety glasses.
- · Never attempt to operate this appliance if it is damaged, malfunctioning, partially disassembled, or has missing or broken parts, including a damaged cord or plug.
- Only connect this product to a dedicated grounded electrical outlet rated for use with this product (115 V, 60 Hz, AC only). It is the user's responsibility to replace a standard 2-prong wall outlet with a standard 3-prong wall outlet.
- Do not use an outlet that can be turned off with a switch. Do not use an extension cord.
- The appliance must be positioned for easy access to a power source.
- When moving the refrigerator, be careful not to roll over or damage the power cord.
- Contact an authorized service center when installing or relocating the refrigerator.
- Do not, under any circumstances, cut or remove the third (ground) prong from the power cord.
- Keep packing materials out of the reach of children. Packaging material can be dangerous for children. There is a risk of suffocation.
- Do not install the refrigerator in a damp or dusty place where insulation on electrical parts may deteriorate.
- Do not place the refrigerator in direct sunlight or expose it to the heat from heating appliances such as stoves or heaters.









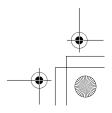
IMPORTANT SAFFTY INSTRUCTIONS

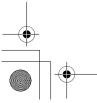
• Do not bend or pinch the power cord excessively or place heavy objects on it.

Operation

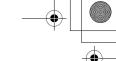
- This appliance is intended to be used in household and similar applications such as:
 - staff kitchen areas in shops, offices and other working environments;
 - farm houses and by clients in hotels, motels and other residential type environments;
 - bed and breakfast type environments;
 - catering and similar non-retail applications.
- · This product is not to be used for special purposes such as the storage of medicine or test materials or for use on ships, etc.
- · DO NOT allow children to climb, stand, or hang on the refrigerator doors or on the shelves in the refrigerator. They could damage the refrigerator and seriously injure themselves.
- Do not allow children to climb into the refrigerator. They could be trapped and suffocated.
- Children should be supervised to ensure that they do not play with the refrigerator.
- Keep fingers out of pinch point areas; clearances between the doors and cabinets are necessarily small. Be careful closing doors when children are nearby.
- Do not touch frozen food or the metal parts in the freezer compartment with wet or damp hands. Doing so may cause frostbite.
- Do not refreeze frozen food that has thawed completely. Doing so may result in a serious health hazard.
- Do not use an adapter plug or plug the power plug into a multi-outlet extension cord.
- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- Do not operate the refrigerator or touch the power cord with wet hands.
- Do not modify or extend the power cord.
- Do not use an uncertified power outlet. Do not plug appliance into a damaged wall outlet.
- Do not put hands, feet or other objects into the air vents or bottom of the refrigerator. Doing so could result in personal injury or electric shock.
- In the event of a gas leak (propane/LPG), ensure the area is adequately ventilated and contact an authorized service center before resuming use. Do not touch the refrigerator or power cord of the refrigerator.
- Disconnect the power cord immediately and contact an authorized service center if there is a strange noise, odor, or smoke coming from the appliance.
- Do not use any fuse (such as copper, steel wire, etc.) other than a standard fuse.
- Do not place or use an electrical appliance inside the refrigerator, unless it is of a type recommended by the manufacturer.
- Do not put animals inside the appliance.
- Do not place heavy or fragile objects, liquid filled containers, combustible substances, or flammable objects (such as candles and lamps) on the appliance.
- If connected to a circuit protected by fuses, use time delay fuse.
- Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.
- Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
- Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer.
- Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.







IMPORTANT SAFETY INSTRUCTIONS



Maintenance

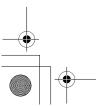
- Do not use a hair dryer to dry the inside of the refrigerator.
- Do not light a candle to remove odors in the refrigerator.
- In the event of a refrigerant leak, move flammable objects away from the refrigerator. Ensure the area is adequately ventilated and contact an authorized service center.
- Keep flammable materials and vapors, such as gasoline, away from the refrigerator.
- 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.
- Unplug the power plug before cleaning or repairing the refrigerator.
- The refrigerator and freezer compartment lights are interior LED lighting, and service should be performed by a qualified technician.
- Unplug the power plug immediately in the event of a blackout or thunderstorm.
- Turn the power off if water or dust penetrates into the refrigerator. Call a service agent.
- Do not store glass containers or soda in the freezer compartment. Contents may expand when frozen, break the container and cause injury.
- Do not store, disassemble or repair the appliance yourself or allow unqualified personnel to do so.

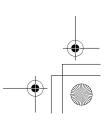
Disposal

- Junked or abandoned refrigerators are dangerous, even if they are sitting for only a few days. When disposing of the refrigerator, remove the packing materials from the door or take off the doors but leave the shelves in place so that children may not easily climb inside.
- If disposing of a refrigerator, make sure the refrigerant and insulation foam are removed for proper disposal by a qualified servicer. If you release the refrigerant or throw away the insulation foam, you may be fined or imprisoned in accordance with the relevant environmental law. Insulation foam contains flammable blowing gas.
- When discarding the appliance, remove the door gasket while leaving the shelves and bins in place, and keep children away from the appliance.

Grounding Instructions

- · Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service personnel if you are in doubt whether the appliance is properly grounded. Do not modify the plug provided with the appliance; if it will not fit the outlet, have a proper outlet installed by a qualified electrician.
- Have a certified electrician check the wall outlet and wiring for proper grounding.
- · Never unplug the appliance by pulling on the power cord. Always grip the plug firmly and pull straight out from the outlet. Failure to do so may damage the power cord, resulting in a risk of fire and electric shock.















IMPORTANT SAFFTY INSTRUCTIONS

Risk of Fire and Flammable Materials



This appliance contains a small amount of isobutane refrigerant (R600a), which is combustible. When transporting and installing the appliance, care should be taken to ensure that no parts of the refrigerating circuit are damaged. Refrigerant squirting out of the pipes could ignite or cause an eye injury. If a leak is detected, avoid any naked flames or potential sources of ignition and air out the room in which the appliance is standing for several minutes.

In order to avoid the creation of a flammable gas air mixture if a leak in the refrigerating circuit occurs, the size of the room in which the appliance may be sited depends on the amount of refrigerant used. The room must be 10.8 square feet (1 square meter) in size for every 8g of R600a refrigerant inside the appliance. The amount of refrigerant in your particular appliance is shown on the identification plate inside the appliance. Never start up an appliance showing any signs of damage. If in doubt, consult your dealer.

CAUTION



CAUTION

• To reduce the risk of minor or moderate injury to persons, malfunction, or damage to the product or property when using this product, follow basic precautions, including the following:

Installation

- Do not install the refrigerator where there may be a danger of the unit falling.
- The refrigerator must be properly installed in accordance with the Installation Instructions.

Operation

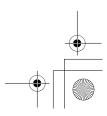
- Do not use aerosols near the refrigerator.
- This appliance is intended to be used only in domestic and similar applications.
- · Do not strike or apply excessive force to any glass surface. Do not touch glass surfaces if they are cracked or broken.
- Do not overfill or pack items too tightly into door bins. Doing so may cause damage to the bin or personal injury if items are removed with excessive force.

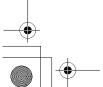
Maintenance

- Do not use strong detergents like wax or thinners for cleaning. Clean with a soft cloth.
- Remove foreign objects (such as dust and water) off the prongs of the power plug and contact areas. Do not use a wet or damp cloth when cleaning the plug.
- Do not spray water directly on the inside or outside of the refrigerator.
- Do not clean glass shelves or covers with warm water when they are cold. They may break if exposed to sudden temperature changes.

SAVE THESE INSTRUCTIONS

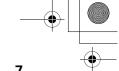










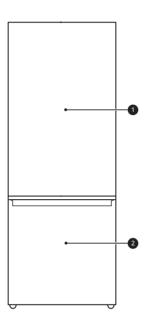


PRODUCT OVERVIEW

Product Features

The images in this guide may be different from the actual components and accessories, which are subject to change by the manufacturer without prior notice for product improvement purposes.

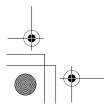
Exterior

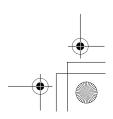




2 Freezer

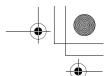
Frozen food compartment.







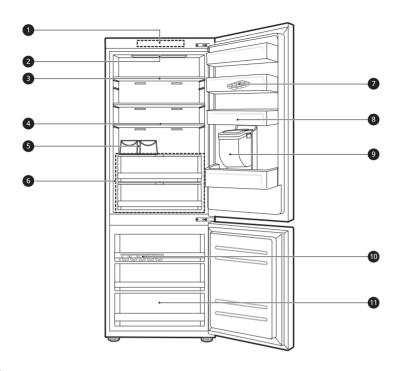




8 PRODUCT OVERVIEW

Interior

† This feature is only available on some models.



Control Panel

Sets the refrigerator and freezer temperatures.

2 LED Interior Lighting

Lights up the inside of the refrigerator.

3 Adjustable Refrigerator Shelf

The refrigerator shelves are adjustable to meet individual storage needs.

Folding Shelf[†]

Store taller items, such as gallon containers or bottles, by pushing the front half of the shelf underneath the back half of the shelf.

5 Bottle Rack[†]

Stores tall bottles or containers.

A CAUTION

 Do not store short bottles or containers on the bottle rack. The items may fall and cause an injury or appliance damage.

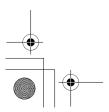
6 Humidity Controlled Crisper[†]

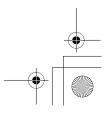
Set the humidity level to keep various food items fresh.

- Type A: Set the humidity for storing vegetables, meat, or fish.
- Type B: Set the humidity for storing vegetables or fruit.

Movable Egg Tray[†]

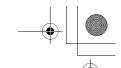
Conveniently stores eggs or other small items.











PRODUCT OVERVIEW

• Do not use the egg tray in the freezer. To keep eggs fresh longer, do not store them on the top shelf of the refrigerator or in the vegetable drawer.

8 Door Bin

Stores chilled food, drinks, or condiments.

Water Dispenser Tank[†]

Supplies water to the dispenser. On non-plumbed models, this is filled manually. Fill with potable water only.

Ice Tray

For producing and storing ice.

• For additional storage space, remove the ice tray or ice bin.

1 Freezer Drawer

Use for long-term storage of frozen items.

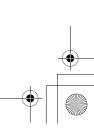
Product Specifications

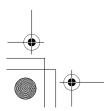
The appearance and specifications listed in this manual may vary due to constant product improvements.

Electrical requirements: 115 V, 60 Hz

Model name	LBNC12231*, LBNC12241*, LBNC12251*	
Description	Bottom freezer refrigerator	
Net weight	154 lb (70 kg)	















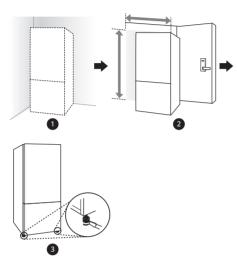
10 INSTALLATION

INSTALLATION

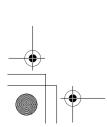
Before Installing

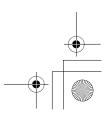
Installation Overview

Please read the following installation instructions first after purchasing this product or transporting it to another location.



- Unpacking the Refrigerator
- 2 Choosing the Proper Location
- Reversing Doors and Leveling













WARNING

- Use two or more people to move and install the refrigerator. Failure to do so can result in back injury or other injury.
- The refrigerator is heavy. Protect the floor when moving the refrigerator for cleaning or service. Always pull the refrigerator straight out when moving it. Do not wiggle or walk the refrigerator when trying to move it, as floor damage could
- Keep flammable materials and vapors, such as gasoline, away from the refrigerator. Failure to do so can result in fire, explosion, or death.

NOTE

- · Remove tape and any temporary labels from your refrigerator before using. Do not remove any warning labels, the model and serial number label, or the Tech Sheet that is located under the front of the refrigerator.
- To remove any remaining tape or glue, rub the area briskly with your thumb. Tape or glue residue can also be easily removed by rubbing a small amount of liquid dish soap over the adhesive with your fingers. Wipe with warm water and dry.
- Do not use sharp instruments, rubbing alcohol, flammable fluids, or abrasive cleaners to remove tape or glue. These products can damage the surface of your refrigerator.
- · Reinstall or adjust shelves as needed. Refrigerator shelves are installed in the shipping position. Reinstall shelves according to your individual storage needs.

Choosing the Proper Location

Electricity

Use an individual, grounded outlet:115 Volts, 60 Hz, AC, 15 amps minimum.

M WARNING

- · Do not overload house wiring and cause a fire hazard by plugging in multiple appliances in the same outlet with the refrigerator.
- To reduce the risk of electric shock, do not install the refrigerator in a wet or damp area.

Flooring

To avoid noise and vibration, the unit must be installed and leveled on a solidly constructed floor. If required, adjust the leveling legs to compensate for the unevenness of the floor.

NOTE

· Installing on carpeting, soft tile surfaces, a platform or weakly supported structure is not recommended.

Ambient Temperature

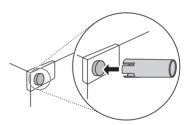
Install this appliance in an area where the temperature is between 55 °F (13 °C) and 110 °F (43 °C).

If the temperature around the appliance is too low or high, cooling ability may be adversely affected.

Installing the Rear Spacers

This feature is only available on some models.

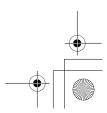
Install the spacers on the upper corners at the back of the appliance. The spacers are included with the accessory kit inside the appliance.



NOTE

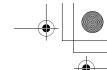
• The spacers help improve the energy efficiency of the appliance by providing clearance between the back of the appliance and the wall. This allows for improved air circulation.







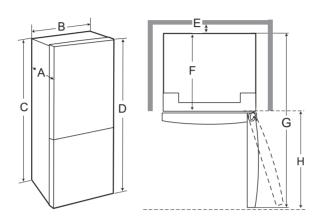




12 INSTALLATION

Dimensions and Clearances

- Check the dimensions of the appliance and the installation path to ensure there is sufficient room to move the refrigerator through doors or narrow openings.
- The installation location chosen for the refrigerator should allow space behind the unit for connections and airflow and space in front to open the doors and drawers.
- · Too small of a distance from adjacent items may result in lowered freezing capability and increased electricity consumption charges. Allow at least 29 1/8 inches (740 mm) in front of the refrigerator to open the doors, and at least 2 inches (50 mm) between the back of the refrigerator and the wall.



-	Dimension/Clearance	LBNC12231*, LBNC12241*, LBNC12251*
Α	Depth	26 5/8" (677 mm)
В	Width	23 1/2" (595 mm)
С	Height to Top of Case	73 1/4" (1860 mm)
D	Height to Top of Hinge	73 1/4" (1862 mm)
E	Back Clearance	2" (50 mm)
F	Depth without Door	24" (610 mm)
G	Depth (Total with Door Open 90°)	48 3/16" (1225 mm)
Н	Front Clearance	29 1/8" (740 mm)

Reversing Doors and Leveling

Reversing Doors

This feature is only available on some models.

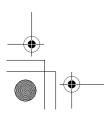
Your appliance is designed with reversible doors which can be assembled to open from either the left or right side to suit your kitchen design.

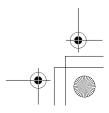
Door reversal must be done by an authorized installer or service person. If it is not, any damage caused by improperly installed doors will not be covered by the warranty.

Leveling

The refrigerator has two front leveling legs. Adjust the legs to alter the tilt from front-to-back or sideto side. If the refrigerator seems unsteady or the doors do not close easily, adjust the refrigerator's tilt, using the instructions below:

Turn the leveling leg to the left to raise that side of the refrigerator or to the right to lower it. It may take several turns of the leveling leg to adjust the tilt of the refrigerator.

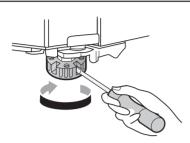








• A flare nut wrench works best, but an open-end wrench will suffice. Do not over-tighten.



2 Open both doors, and check to make sure that they close easily. If the doors do not close easily, tilt the refrigerator slightly more to the rear by turning both leveling legs to the left. It may take several more turns, and be sure to turn both leveling legs the same amount.

Turning on the Power

 After installing, plug the refrigerator's power cord into a 3-prong grounded outlet and push the refrigerator into the final position.

A CAUTION

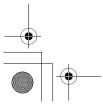
- Connect to a rated power outlet.
- Have a certified electrician check the wall outlet and wiring for proper grounding.
- Do not damage or cut off the ground terminal of the power plug.

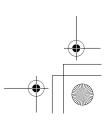
Position the Refrigerator

 Arrange the coil of tubing so that it does not vibrate against the back of the refrigerator or against the wall. Push the refrigerator back to the wall.











'

OPERATION

Before Use

14 OPERATION

Checklist

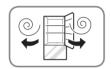


Clean the refrigerator.

Clean the refrigerator thoroughly and wipe off all dust that accumulated during shipping.

A CAUTION

- Do not scratch the refrigerator with a sharp object or use a detergent that contains alcohol, a flammable liquid or an abrasive when removing any tape or adhesive from the refrigerator. Remove adhesive residue by wiping it off with your thumb or dish detergent.
- Do not peel off the model or serial number label or the technical information on the rear surface of the refrigerator.



Open refrigerator doors and freezer drawers to ventilate the interior

The inside of the refrigerator may smell like plastic at first. Remove any adhesive tape from inside the refrigerator and open the refrigerator doors and the freezer drawers for ventilation.



Connect the power supply.

Check if the power supply is connected before use.

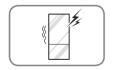


Wait for the refrigerator to cool.

Allow the refrigerator to run for at least two to three hours before putting food in it. Check the flow of cold air in the freezer compartment to ensure proper cooling.

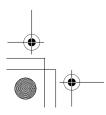


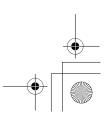
• Putting food in the refrigerator before it has cooled could cause the food to spoil, or a bad odor to remain inside the refrigerator.



The refrigerator makes a loud noise after initial operation.

This is normal. The volume will decrease as the temperature decreases.





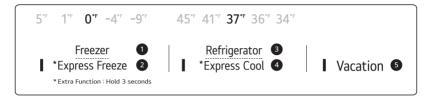




Depending on the model, some of the following functions may not be available.

The actual control panel may differ from model to model.

Control Panel Features



Freezer

Indicates the set temperature of the freezer compartment in Fahrenheit (°F). The default freezer temperature is 0°F. Press the Freezer button repeatedly to select a new set temperature from -9 °F to 5

2 Express Freeze

This function increases both ice making and freezing capabilities.

- To activate, press and hold the **Express Freeze** button until the LED lights up on the control panel.
- The function operates for about 24 hours, then turns off automatically.
- Stop the function manually by pressing and holding the button again.

8 Refrigerator

Indicates the set temperature of the refrigerator compartment in Fahrenheit (°F). The default refrigerator temperature is 37 °F. Press the Refrigerator button repeatedly to select a new set temperature from 34 °F to 45 °F.

NOTE

• The displayed temperature is the target temperature, and not the actual temperature of the refrigerator. The actual refrigerator temperature depends on the food inside the refrigerator.

4 Express Cool

Use this function to quickly cool a large amount of fresh food.

- To activate, press and hold the **Express Cool** button until the LED lights up on the control panel.
- The function operates for about 7 hours, then turns off automatically.
- Stop the function manually by pressing and holding the button again.

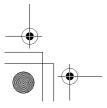
S Vacation

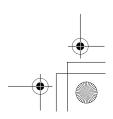
Set the refrigerator to Vacation mode to reduce energy consumption when you are away from home for a few days.

- Press the **Vacation** button to turn the function off or on. The LED stays lit when the function is on.
- When this function is on, the other buttons on the control panel are locked. When you return home, remember to turn this function off to unlock the other buttons and return the refrigerator to its previous temperature settings.

NOTE

• When the refrigerator is in the Power Saving Mode, the display remains off until a door is opened or a button is pressed. Once on, the display remains on for 20 seconds.











16 OPERATION

Sabbath Mode

Using the Sabbath Mode

Sabbath mode is used on the Jewish Sabbath and holidavs.

- To turn Sabbath mode on, touch the display to activate it, then press and hold the Express Cool and Vacation buttons for 3 seconds until both LEDs turn on.
- To turn Sabbath mode off manually, press and hold the Express Cool and Vacation buttons for 3 seconds.

NOTE

- · Sabbath mode automatically turns off after 96
- Once turned on, Sabbath mode is maintained even after a power outage.
- Selecting Sabbath mode automatically turns off the alarm functions.

Water Dispenser

This feature is only available on some models.

Before Using the Water Dispenser

A CAUTION

- Do not hang on to or place heavy objects on the refrigerator's dispenser.
- Keep children away from the dispenser. Children may play with or damage the controls.
- Dispense and throw away 2.5 gallons of water (flush for approximately 5 minutes) after installation. Do not dispense the entire 2.5 gallon amount continuously. Press and release the dispenser pad for cycles of 30 seconds ON and 60 seconds OFF. This is also necessary if the refrigerator has not been used for a long time.
- If water dispenses unexpectedly, turn off the water supply and contact an LG Electronics Customer Information Center.

NOTE

· Some dripping may occur after dispensing. Hold a cup beneath the dispenser for a few seconds after dispensing to catch all of the drops.

Using the Water Tank

Filling the Water Tank

The water tank holds the water which is to be dispensed.

Open the cap on the top of the water tank.



- Fill the water tank with potable water and close the cap.
 - The water tank can hold up to 0.61 gallons (2.3 liters).

WARNING

- · Fill with potable water only. Do not fill the water tank with beverages or hot water.
- Children should not be allowed near the water tank.

▲ CAUTION

· Do not apply excessive force or impact when removing or assembling the water tank.

NOTE

- The water tank should be washed before filling it with potable water.
- If water does not come out, fill the water tank with potable water.

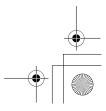
Cleaning the Water Tank

Clean water tank periodically and keep them clean at all times.

Hold the handle of the water tank and lift it.

















Remove the cover while the handle of the water tank is lifted.



A CAUTION

Do not apply excessive force or impact when removing or assembling the water dispenser tank. Doing so can cause appliance damage or injury.

NOTE

- Before using the water dispenser tank after installing the appliance, it should be washed before filling it with water.
- · Check if the water dispenser tank has been placed on the appliance correctly. If it is not assembled correctly, water may leak from the tank into the appliance.

Using the Dispenser

You can dispense water by pressing the lever.

• Press the paddle a of the water dispenser to get cold water.



A CAUTION

- · Keep children away from the dispenser to prevent children playing with or damaging the controls.
- Do not hang on to or place heavy objects on the refrigerator's dispenser.

NOTE

• If the cup rim is small, water may splash out of the glass or miss it completely.

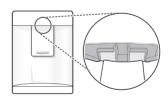
Cleaning the Dispenser Tray

Wipe the entire area with a damp cloth. The dispenser tray may become wet easily due to spilled water.



Cleaning the Dispenser Outlet

Wipe the dispenser outlet frequently with a clean cloth as it may get dirty easily.



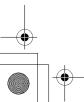
NOTE

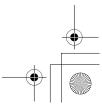
· Lint from a cloth may adhere to the outlet.

Storing Food

NOTE

- If you are leaving home for a short period, like a short vacation, the refrigerator should be left on. Refrigerated foods that are able to be frozen will stay preserved longer if stored in the freezer.
- If you are leaving the refrigerator turned off for an extended period, remove all food and unplug the power cord. Clean the interior, and leave the door open to prevent fungi from growing in the refrigerator.











18 OPERATION

NOTE

• If doors are opened or closed too often, warm air may penetrate the refrigerator and raise its temperature. This can increase the running costs of the unit.

Food Storage Tips

Wrap or store food in the refrigerator in airtight and moisture-proof material unless otherwise noted. This prevents food odor and taste transfer throughout the refrigerator. For dated products, check date code to ensure freshness.

CAUTION

- Do not overfill or pack items too tightly into door bins. Doing so may cause damage to the bin or personal injury if items are removed with excessive force.
- Do not store glass containers in the freezer. Contents may expand when frozen, break the container and cause injury.

How to Store Food

- · Butter or Margarine
 - Keep opened butter in covered dish or closed compartment. When storing an extra supply, wrap in freezer packaging and freeze.
- Cheese
 - Store in original wrapping until used. Once opened, rewrap tightly in plastic wrap or aluminum foil.
- Milk
 - Wipe milk cartons. For coldest milk, place containers on an interior shelf.
- Eggs
 - Store in original carton on interior shelf, not on door shelf.
- Fruit
 - Do not wash or hull fruit until it is ready to be used. Sort and keep fruit in original container in a crisper, or store in completely closed paper bag on refrigerator shelf.
- · Leafy Vegetables
 - Remove store wrapping, trim or tear off bruised and discolored areas, wash in cold water, and drain. Place in plastic bag or plastic container and store in crisper.

- Vegetables with skins (carrots, peppers)
 - Place in plastic bags or plastic container and store in crisper.
- Fish
 - Freeze fresh fish and shellfish if they are not being eaten the same day purchased. Eating fresh fish and shellfish the same day purchased is recommended.
- Leftovers
 - Cover leftovers with plastic wrap or aluminum foil, or store in plastic containers with tight lids.

NOTE

- Do not store food with high moisture content towards the top of the refrigerator. The moisture could come into direct contact with the cold air and freeze.
- Wash food before storing it in the refrigerator. Vegetables should be washed, and food packaging should be wiped down to prevent adjacent foods from being contaminated.
- · If the refrigerator is kept in a hot and humid place, frequent opening of the door or storing a lot of vegetables in the refrigerator may cause condensation to form. Wipe off the condensation with a clean cloth or a paper towel.

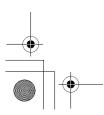
Storing Frozen Food

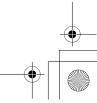
Check a freezer guide or a reliable cookbook for further information about preparing food for freezing or food storage times.

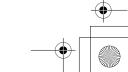
Freezing

Your freezer will not quick-freeze a large quantity of food. Do not put more unfrozen food into the freezer than will freeze within 24 hours (no more than 2 to 3 pounds of food per cubic foot of freezer space). Leave enough space in the freezer for air to circulate around packages. Be careful to leave enough room at the front so the door can close tightly.

Storage times will vary according to the quality and type of food, the type of packaging or wrap used (how airtight and moisture-proof) and the storage temperature. Ice crystals inside a sealed package are normal. This simply means that moisture in the food and air inside the package have condensed, creating ice crystals.













· Allow hot foods to cool at room temperature for 30 minutes, and then package and freeze. Cooling hot foods before freezing saves energy.

Packaging

Successful freezing depends on correct packaging. When you close and seal the package, it must not allow air or moisture in or out. If it does, you could have food odor and taste transfer throughout the refrigerator and could also dry out frozen food.

Packaging recommendations

- · Rigid plastic containers with tight-fitting lids
- · Straight-sided canning/freezing jars
- · Heavy-duty aluminum foil
- Plastic-coated paper
- · Non-permeable plastic wraps
- · Specified freezer-grade self-sealing plastic bags Follow package or container instructions for proper freezing methods.

Do not use

- Bread wrappers
- · Non-polyethylene plastic containers
- · Containers without tight lids
- · Wax paper or wax-coated freezer wrap
- · Thin, semi-permeable wrap

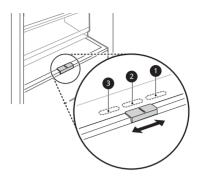
Humidity Controlled Crispers

Using the Humidity Controlled Crispers

This feature is only available on some models.

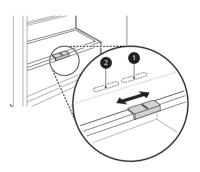
You can control the amount of humidity by sliding the lever at the front of the drawer.

Type A



- For storing vegetables.
- 2 For storing fish.
- For storing meat.

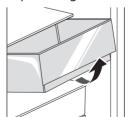
Type B



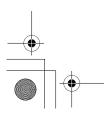
- For storing vegetables.
- 2 For storing fruit.

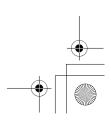
Removing/Assembling the **Humidity Controlled Crispers**

Pull out the crisper to full extension, lift the front up, and pull straight out.



To reassemble, slightly tilt up the front, insert the crisper into the frame and push it back into place.







20 OPERATION

Refrigerator Shelves

The shelves in the refrigerator are adjustable to meet individual storage needs.

Adjusting the shelves to fit items of different heights will make finding the exact item you want easier.

Detaching/Assembling Shelves

CAUTION

- Do not clean glass shelves with warm water while they are cold. Shelves may break if exposed to sudden temperature changes or impact.
- To detach, lift the rear of the shelf and pull it out.



To assemble, slide the shelf into the guides until it stops.

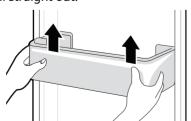


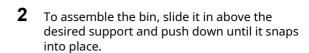
Door Bins

Detaching/Assembling Door Bins

The door bins are removable for easy cleaning and adjustment.

To remove the bin, simply lift the bin up and pull straight out.

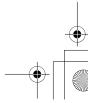


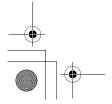


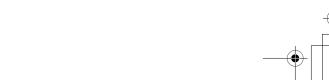
A CAUTION

- · Regularly detach and wash the storage bins and shelves; they can become easily contaminated by food.
- · Do not apply excessive force while detaching or assembling the storage bins.
- Do not use the dishwasher to clean the storage bins and shelves.













LG ThinQ Application

This feature is only available on models with the 🚱 or 🖭 logo.

The **LG ThinQ** application allows you to communicate with the appliance using a smartphone.

Installing the LG ThinQ Application

Search for the **LG ThinQ** application from the Google Play Store or Apple App Store on a smartphone. Follow instructions to download and install the application.

LG ThinQ Application Feature

Smart Diagnosis

If you experience a problem while using the appliance, this smart diagnosis feature will help you diagnose the problem.

NOTE

· This information is current at the time of publication. The application is subject to change for product improvement purposes without notice to users.

Smart Diagnosis

This feature is only available on models with the or 🖭 logo.

Use this feature to help you diagnose and solve problems with your appliance.

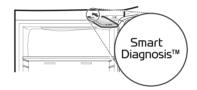
NOTE

- For reasons not attributable to LGE's negligence, the service may not operate due to external factors such as, but not limited to, Wi-Fi unavailability, Wi-Fi disconnection, local app store policy, or app unavailability.
- The feature may be subject to change without prior notice and may have a different form depending on where you are located.

Using Audible Diagnosis to Diagnose Issues

Follow the instructions below to use the audible diagnosis method.

- Launch the **LG ThinQ** application and select the Smart Diagnosis feature in the menu. Follow the instructions for audible diagnosis provided in the **LG ThinQ** application.
- Open the refrigerator door.
- Press the **Vacation** button.
 - If the door has been open for longer than 60 seconds, close the door and repeat steps 1 and 2.
- Hold the phone near the speaker hole.



Press and hold the Freezer button for three seconds while continuing to hold your phone to the speaker.

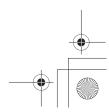


- After you hear three beeps, release the Freezer button.
- Keep the phone in place until the tone transmission has finished. The display will count down the time. Once the countdown is over and the tones have stopped, the diagnosis will be displayed in the application.

NOTE

 For best results, do not move the phone while the tones are being transmitted.











22 MAINTENANCE

MAINTENANCE

Cleaning

M WARNING

• Use non-flammable cleaner. Failure to do so can result in fire, explosion, or death.

A CAUTION

- Do not use an abrasive cloth or sponge when cleaning the interior and exterior of the refrigerator.
- Do not place your hand on the bottom surface of the refrigerator when opening and closing the doors.

General Cleaning Tips

- Both the refrigerator and freezer sections defrost automatically; however, clean both sections once a month to prevent odors.
- · Wipe up spills immediately.
- Unplug the refrigerator or disconnect power before cleaning.
- Remove all removable parts, such as shelves.
- Use a clean sponge or soft cloth and a mild detergent in warm water. Do not use abrasive or harsh cleaners.
- Hand wash, rinse and dry all surfaces thoroughly.

Exterior

For products with black stainless steel exterior, spray glass cleaner on a clean microfiber cloth and rub in direction of grain. Do not spray glass cleaner directly at the display panel. Do not use harsh or abrasive cleaners.

For products with a standard stainless steel exterior, use a damp microfiber cloth and rub in the direction of the grain. Dry with a paper towel to avoid streaks. For stubborn stains and fingerprints, use a few drops of liquid dish soap in water, and rinse with hot water before drying. Do not use abrasive or harsh cleaners.

Inside Walls

 Allow freezer to warm up so the cloth will not stick. To help remove odors, wash the inside of the refrigerator with a mixture of baking soda and warm water. Mix 2 tablespoons of baking soda to 1 quart of water (26 g soda to 1 liter water.) Be sure the baking soda is completely dissolved so it does not scratch the surfaces of the refrigerator.

Door Liners and Gaskets

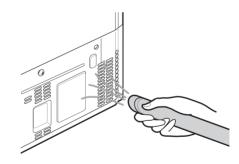
Use a clean sponge or soft cloth and a mild detergent in warm water. Do not use cleaning waxes, concentrated detergents, bleaches, or cleaners containing petroleum on plastic refrigerator parts.

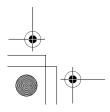
Plastic Parts (Covers and Panels)

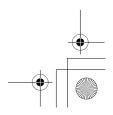
Use a clean sponge or soft cloth and a mild detergent in warm water. Do not use glass cleaners, abrasive cleansers, or flammable fluids. These can scratch or damage the material.

Condenser Coils

Use a vacuum cleaner with a brush or crevice attachment to clean the condenser cover and vents. Do not remove the panel covering the condenser coil area.













FAQs

Frequently Asked Questions

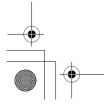
- Q: What are the best temperature settings for my refrigerator and freezer?
- The default setting for the refrigerator is 37° Fahrenheit (3° Celsius). The default setting for the A: freezer is 0° Fahrenheit (-18° Celsius). Adjust these settings as necessary to keep food at desired temperatures. Milk should be cold when stored on the inner shelf of the refrigerator. Ice cream should be firm and ice cubes should not melt in the freezer.
- How do I set the refrigerator and freezer temperatures? Q:
- A: Continually press the **Refrigerator** or **Freezer** button on the control panel until the desired temperature appears. The numbers will cycle from highest to lowest and then return to the highest again with continuous pressing.

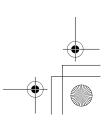
Before Calling for Service

Review this section before calling for service; doing so will save you both time and money.

Cooling

Problem	Possible Cause & Solution		
Refrigerator is not cooling or has no power.	A fuse in your home may be blown or the circuit breaker tripped. Or the appliance is connected to a GFCI (Ground Fault Circuit Interrupter) outlet, and the outlet's circuit breaker has tripped.		
	• Check the main electrical box and replace the fuse or reset the circuit breaker. Do not increase fuse capacity. If the problem is a circuit overload, have it corrected by a qualified electrician.		
	Reset the circuit breaker on the GFCI. If the problem persists, contact an electrician.		
	The refrigerator control is set to OFF (some models).		
	Turn the control ON. Refer to the Setting the Controls section for proper temperature settings.		
	Refrigerator is in the defrost cycle.		
	During the defrost cycle, the temperature of each compartment may rise slightly. Wait 30 minutes and confirm the proper temperature has been restored once the defrost cycle has completed.		
	Refrigerator was recently installed.		
	It may take up to 24 hours for each compartment to reach the desired temperature.		
	Refrigerator was recently relocated.		
	• If the refrigerator was stored for a long period of time or moved on its side, it is necessary for the refrigerator to stand upright for 24 hours before connecting it to power.		







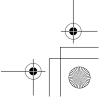






Duchlore	Pagaible Course 9 Calubian		
Problem	Possible Cause & Solution		
Cooling system runs too much.	Refrigerator is replacing an older model. Modern refrigerators require more operating time but use less energy due to more efficient technology.		
	Refrigerator was recently plugged in or power restored.		
	The refrigerator will take up to 24 hours to cool completely.		
	The door is opened often or a large amount of food / hot food was added.		
	 Adding food and opening the door warms the refrigerator, requiring the compressor to run longer in order to cool the refrigerator back down. In order to conserve energy, try to get everything you need out of the refrigerator at once, keep food organized so it is easy to find, and close the door as soon as the food is removed. (Refer to the Food Storage Guide.) 		
	Doors are not closed completely.		
	Firmly push the doors shut. If they will not shut all the way, the "Doors will not close correctly or pop open" section in Troubleshooting.		
	Refrigerator is installed in a hot location.		
	 The compressor will run longer under warm conditions. At normal room temperatures (70 °F or 21 °C) expect your compressor to run about 40 % to 80 % of the time. Under warmer conditions, expect it to run even more often. The refrigerator should not be operated above 110 °F (43 °C). 		
	Condenser / back cover is clogged.		
	Use a vacuum cleaner with an attachment to clean the condenser cover and vents. Do not remove the panel covering the condenser coil area.		
Interior moisture	Doors are opened often or for long periods of time.		
buildup.	When the doors are opened often or for long periods of time, warm, humid air enters the compartment. This raises the temperature and moisture level within the compartment. To lessen the effect, reduce the frequency and duration of door openings.		
	Doors are not closed correctly.		
	See the "Doors will not close correctly or pop open" section.		
	Weather is humid.		
	 Humid weather allows additional moisture to enter the compartments when the doors are opened leading to condensation or frost. Maintaining a reasonable level of humidity in the home will help to control the amount of moisture that can enter the compartments. 		
	Defrost cycle recently completed.		
	During the defrost cycle, the temperature of each compartment may rise slightly and condensation may form on the back wall. Wait 30 minutes and confirm that the proper temperature has been restored once the defrost cycle has completed.		
	Food is not packaged correctly.		
	Food stored uncovered or unwrapped, and damp containers can lead to moisture accumulation within each compartment. Wipe all containers dry and store food in sealed packaging to prevent condensation and frost.		
Food is freezing in	Food with high water content was placed near an air vent.		
the refrigerator compartment.	Rearrange items with high water content away from air vents.		
compartment.	Refrigerator temperature control is set incorrectly.		
	If the temperature is too cold, adjust the control one increment at a time and wait for the temperature to stabilize. Refer to the Control Panel section for more information.		
	Refrigerator is installed in a cold location.		
	• When the refrigerator is operated in temperature below 41 °F (5 °C), food can freeze in the refrigerator compartment. The refrigerator should not be operated in temperature below 55 °F (13 °C).		







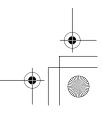


ENGLISH

TROUBLESHOOTING 25

Problem	Possible Cause & Solution		
Refrigerator or	Incorrect temperature control settings.		
Freezer section is too cold.	If the temperature is too cold, adjust the control one increment at a time and wait for the temperature to stabilize. Refer to the Control Panel for more information.		
Frost or ice crystals form on frozen food	Condensation from food with a high water content has frozen inside of the food package.		
(inside of sealed package).	This is normal for food items with a high water content.		
puckuge).	Food has been left in the freezer for a long period of time.		
	Do not store food items with high water content in the freezer for a long period of time.		
Frost or ice crystals	Door is opened frequently or for long periods of time.		
form on frozen food (outside of package).	When the doors are opened often or for long periods of time, warm, humid air enters the compartment. This raises the temperature and moisture level within the compartment. Increased moisture will lead to frost and condensation. To lessen the effect, reduce the frequency and duration of door openings.		
	Door is not closing properly.		
	Refer to the "Doors will not close correctly or pop open" section in the Troubleshooting.		
Refrigerator or	Refrigerator was recently installed.		
Freezer section is too warm.	• It may take up to 24 hours for each compartment to reach the desired temperature.		
	The air vents are blocked. Cold air circulates from the freezer to the fresh food section and back again through air vents in the wall dividing the two sections.		
	Locate air vents by using your hand to sense airflow and move all packages that block vents and restrict airflow. Rearrange items to allow air to flow throughout the compartment.		
	Doors are opened often or for long periods of time.		
	When the doors are opened often or for long periods of time, warm, humid air enters the compartment. This raises the temperature and moisture level within the compartment. To lessen the effect, reduce the frequency and duration of door openings.		
	Unit is installed in a hot location.		
	• The refrigerator should not be operated in temperatures above 110 °F (43 °C).		
	A large amount of food or hot food was added to either compartment.		
	Adding food warms the compartment requiring the cooling system to run. Allowing hot food to cool to room temperature before putting it in the refrigerator will reduce this effect.		
	Doors are not closed correctly.		
	See the "Doors will not close correctly or pop open" section in the Troubleshooting.		
	Temperature control is not set correctly.		
	• If the temperature is too warm, adjust the control one increment at a time and wait for the temperature to stabilize.		
	Defrost cycle has recently completed.		
	During the defrost cycle, the temperature of each compartment may rise slightly and condensation may form on the back wall. Wait 30 minutes and confirm the proper temperature has been restored once the defrost cycle has completed.		

















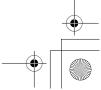


Problem	Possible Cause & Solution		
Icemaker is not	Doors are opened often or for long periods of time.		
making enough ice.	If the doors of the unit are opened often, ambient air will warm the refrigerator which will prevent the unit from maintaining the set temperature. Lowering the refrigerator temperature can help, as well as not opening the doors as frequently.		
	Doors are not closed completely.		
	If the doors are not properly closed, ice production will be affected. See the "Doors will not close correctly or pop open" section in Parts & Features Troubleshooting for more information.		
	The temperature setting for the freezer is too warm.		
	• The recommended temperature for the freezer compartment for normal ice production is 0 °F (-18 °C). If the freezer temperature is warmer, ice production will be affected.		
Icemaker is not	Refrigerator was recently installed or icemaker recently connected.		
making ice	• It may take up to 24 hours for each compartment to reach the desired temperature and for the icemaker to begin making ice.		
Ice has bad taste or	Icemaker was recently installed.		
odor.	Ice that has been stored for too long will shrink, become cloudy, and may develop a stale taste. Throw away old ice and make a new supply.		
	The food has not been stored properly in either compartment.		
	Rewrap the food. Odors may migrate to the ice if food is not wrapped properly.		
	The interior of the refrigerator needs to be cleaned.		
	See the Maintenance section for more information.		
	The ice storage bin needs to be cleaned.		
	Empty and wash the bin (discard old cubes). Make sure that the bin is completely dry before reinstalling it.		

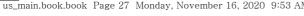
Parts & Features

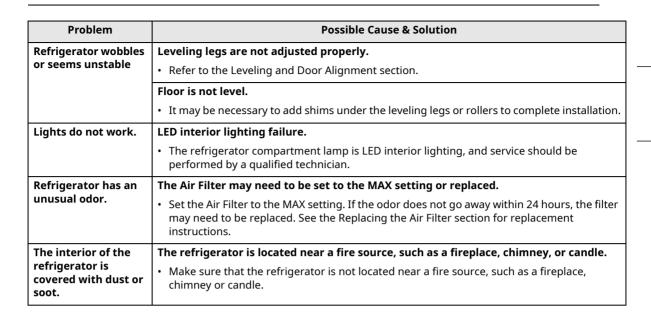
Problem	Possible Cause & Solution		
Doors will not close	Food packages are blocking the door open.		
correctly or pop open.	Rearrange food containers to clear the door and door shelves.		
ope	Ice bin, crisper cover, pans, shelves, door bins, or baskets are out of position.		
	• Push bins all the way in and put crisper cover, pans, shelves and baskets into their correct positions. See the Operation section for more information.		
	The doors were removed during product installation and not properly replaced.		
	Remove and replace the doors according to the Removing and Replacing Refrigerator Handles and Doors section.		
	Refrigerator is not leveled properly.		
	See Door Alignment in the Refrigeration Installation section to level refrigerator.		
Doors are difficult to	The gaskets are dirty or sticky.		
open.	Clean the gaskets and the surfaces that they touch. Rub a thin coat of appliance polish or kitchen wax on the gaskets after cleaning.		
	Door was recently closed.		
	When you open the door, warmer air enters the refrigerator. As the warm air cools, it can create a vacuum. If the door is hard to open, wait one minute to allow the air pressure to equalize, then see if it opens more easily.		







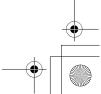




Noises

Problem	Possible Cause & Solution		
Clicking	The defrost control will click when the automatic defrost cycle begins and ends. The thermostat control (or refrigerator control on some models) will also click when cycling on and off.		
	Normal Operation		
Rattling	Rattling noises may come from the flow of refrigerant, the water line on the back of the unit, or items stored on top of or around the refrigerator.		
	Normal Operation		
	Refrigerator is not resting solidly on the floor.		
	Floor is weak or uneven or leveling legs need to be adjusted. See the Leveling and Door Alignment section.		
	Refrigerator with linear compressor was jarred while running.		
	Normal Operation		
Whooshing	Evaporator fan motor is circulating air through the refrigerator and freezer compartments.		
	Normal Operation		
	Air is being forced over the condenser by the condenser fan.		
	Normal Operation		
Gurgling	Refrigerant flowing through the cooling system.		
	Normal Operation		
Popping	Contraction and expansion of the inside walls due to changes in temperature.		
	Normal Operation		
Sizzling	Water dripping on the defrost heater during a defrost cycle.		
	Normal Operation		
Vibrating	If the side or back of the refrigerator is touching a cabinet or wall, some of the normal vibrations may make an audible sound.		
	To eliminate the noise, make sure that the sides and back cannot vibrate against any wall or cabinet.		







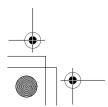


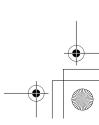






Problem	Possible Cause & Solution			
Dripping	Water running into the drain pan during the defrost cycle.			
	Normal Operation			
Pulsating or high- pitched sound	Your refrigerator is designed to run more efficiently to keep your food items at the desired temperature. The high efficiency compressor may cause your new refrigerator to run longer than your old one, but it is still more energy efficient than previous models. While the refrigerator is running, it is normal to hear a pulsating or high-pitched sound.			
	Normal Operation			











USA

TERMS AND CONDITIONS

ARBITRATION NOTICE: THIS LIMITED WARRANTY CONTAINS AN ARBITRATION PROVISION THAT REQUIRES YOU AND LG ELECTRONICS ("LG") TO RESOLVE DISPUTES BY BINDING ARBITRATION INSTEAD OF IN COURT, UNLESS YOU CHOOSE TO OPT OUT. IN ARBITRATION, CLASS ACTIONS AND JURY TRIALS ARE NOT PERMITTED. PLEASE SEE THE SECTION TITLED "PROCEDURE FOR RESOLVING DISPUTES" BELOW.

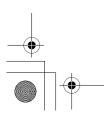
Should your LG Refrigerator ("Product") fail due to a defect in materials or workmanship under normal and proper use, during the warranty period set forth below, LG will, at its option, repair or replace the Product. This limited warranty is valid only to the original retail purchaser of the Product ("You") and applies only when purchased lawfully and used within the United States including U.S. Territories.

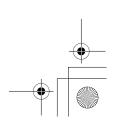
WARRANTY PERIOD			
Refrigerator/Freezer	Sealed System (Condenser, Dryer, Connecting Tube and Evaporator)	Compressor	
One (1) year from the date of original retail purchase	Five (5) years from the date of original retail purchase	Five (5) years from the date of original retail purchase	Linear / Inverter Compressor Only : Parts Only for years 6-10 from
Parts and Labor (internal/ functional parts only)	Parts and Labor	Parts and Labor	the date of original retail purchase (Consumer will be charged for labor)

- Replacement Products and parts are warranted for the remaining portion of the original warranty period or ninety (90) days, whichever is greater.
- Replacement Products and parts may be new, reconditioned, refurbished, or otherwise factory remanufactured.
- Replaced Product or part(s) will be the property of LG.
- Proof of original retail purchase specifying the Product model and date of purchase is required to obtain warranty service under this limited warranty.
- Warranty start date will be ninety (90) days from manufacture date absent valid proof of purchase.

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THE PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THE ABOVE LIMITED WARRANTY. UNDER NO CIRCUMSTANCES SHALL LG OR ITS U.S. DISTRIBUTORS/DEALERS BE LIABLE FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, OR PUNITIVE DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST GOODWILL, LOST REVENUES OR PROFITS, WORK STOPPAGE, IMPAIRMENT OF OTHER GOODS, COST OF REMOVAL AND REINSTALLATION OF THE PRODUCT, LOSS OF USE, OR ANY OTHER DAMAGES WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. LG'S TOTAL LIABILITY, IF ANY, SHALL NOT EXCEED THE PURCHASE PRICE PAID BY YOU FOR THE PRODUCT.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE EXCLUSIONS OR LIMITATIONS MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.









30 LIMITED WARRANTY

THIS LIMITED WARRANTY DOES NOT COVER:

- Service trips to deliver, pick up, or install, educate how to operate, correct wiring, or correct unauthorized repairs.
- Damage or failure of the Product to perform during power failures and interrupted or inadequate electrical service.
- Damage or failure of the Product caused by leaky or broken water pipes, frozen water pipes, restricted drain lines, inadequate or interrupted water supply or inadequate supply of air.
- Damage or failure of the Product resulting from operating the Product in a corrosive atmosphere or contrary to the Product owner's manual.
- Damage or failure of the Product caused by accidents, pests and vermin, lightning, wind, fire, floods, acts of nature, or any other causes beyond the control of LG.
- Damage or failure of the Product caused by unauthorized modification or alteration, or if the Product is used for other than the intended purpose, or any water leakage where the Product was not properly installed.
- Damage or failure of the Product caused by incorrect electrical current, voltage, or plumbing codes.
- Damage or failure of the Product caused by transportation, storage, and/or handling, including scratches, dents, chips, and/or other damage to the finish of the Product, unless such damage is reported within one (1) week of delivery.
- Damage or missing items to any display, open box, or discounted Product.
- Refurbished Product or any Product sold "As Is", "Where Is", "With all Faults", or similar disclaimer.
- Products with original serial numbers that have been removed, altered, or cannot be readily determined.
- · Increases in utility costs and additional utility expenses.
- Any noises associated with normal operation.
- Products used for other than normal and proper household use (e.g., commercial or industrial use, offices, and recreational facilities or vehicles) or contrary to the Product owner's manual.
- Costs associated with removal and reinstallation of the Product for repairs.
- Replacement of light bulbs, filters, or any consumable parts.
- The removal and reinstallation of the Product if it is installed in an inaccessible location or is not installed in accordance with the Product owner's manual.
- Damage or failure of the Product resulting from misuse, abuse, improper installation, repair, or maintenance. Improper repair includes the use of parts not authorized by LG. Improper installation or maintenance includes installation or maintenance contrary to the Product owner's manual.
- Damage or failure of the Product caused by the use of parts, components, accessories (e.g., water filters, etc.), consumable cleaning products, any other products, or services that are not authorized by LG.
- Shelves, door bins, drawers, handle and accessories, except for internal/functional parts covered under this limited warranty.

The cost of repair or replacement under these excluded circumstances shall be borne by You.

TO OBTAIN WARRANTY SERVICE AND ADDITIONAL INFORMATION

Call 1-800-243-0000 and select the appropriate option from the menu.

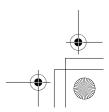
Or visit our website at http://www.lg.com

Or by mail: LG Electronics Customer Service P.O. Box 240007 Huntsville, AL 35813 ATTN: CIC

PROCEDURE FOR RESOLVING DISPUTES:

ALL DISPUTES BETWEEN YOU AND LG ARISING OUT OF OR RELATING IN ANY WAY TO THIS LIMITED WARRANTY OR THE PRODUCT SHALL BE RESOLVED EXCLUSIVELY THROUGH BINDING ARBITRATION, AND NOT IN A COURT OF GENERAL JURISDICTION. BINDING ARBITRATION MEANS THAT YOU AND LG ARE EACH WAIVING THE RIGHT TO A JURY TRIAL AND TO BRING OR PARTICIPATE IN A CLASS ACTION.













Definitions. For the purposes of this section, references to "LG" mean LG Electronics U.S.A., Inc., its parents, subsidiaries and affiliates, and each of their officers, directors, employees, agents, beneficiaries, predecessors in interest, successors, assigns and suppliers; references to "dispute" or "claim" shall include any dispute, claim or controversy of any kind whatsoever (whether based in contract, tort, statute, regulation, ordinance, fraud, misrepresentation or any other legal or equitable theory) arising out of or relating in any way to the sale, condition or performance of the product or this Limited Warranty.

Notice of Dispute. In the event you intend to commence an arbitration proceeding, you must first notify LG in writing at least 30 days in advance of initiating the arbitration by sending a letter to LG at LG Electronics, USA, Inc. Attn: Legal Department- Arbitration 111 Sylvan Avenue, Englewood Cliffs, NJ 07632. You and LG agree to engage in good faith discussions in an attempt to amicably resolve your claim. The notice must provide your name, address, and telephone number; identify the product that is the subject of the claim; and describe the nature of the claim and the relief being sought. If you and LG are unable to resolve the dispute within 30 days, either party may proceed to file a claim for arbitration.

Agreement to Binding Arbitration and Class Action Waiver. Upon failure to resolve the dispute during the 30 day period after sending written notice to LG, you and LG agree to resolve any claims between us only by binding arbitration on an individual basis, unless you opt out as provided below. Any dispute between you and LG shall not be combined or consolidated with a dispute involving any other person's or entity's product or claim. More specifically, without limitation of the foregoing, any dispute between you and LG shall not under any circumstances proceed as part of a class or representative action. Instead of arbitration, either party may bring an individual action in small claims court, but that small claims court action may not be brought on a class or representative basis.

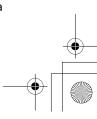
Arbitration Rules and Procedures. To begin arbitration of a claim, either you or LG must make a written demand for arbitration. The arbitration will be administered by the American Arbitration Association ("AAA") and will be conducted before a single arbitrator under the AAA's Consumer Arbitration Rules that are in effect at the time the arbitration is initiated (referred to as the "AAA Rules") and under the procedures set forth in this section. The AAA Rules are available online at www.adr.org/consumer. Send a copy of your written demand for arbitration, as well as a copy of this provision, to the AAA in the manner described in the AAA Rules. You must also send a copy of your written demand to LG at LG Electronics, USA, Inc. Attn: Legal Department- Arbitration 111 Sylvan Avenue, Englewood Cliffs, NJ 07632. If there is a conflict between the AAA Rules and the rules set forth in this section, the rules set forth in this section will govern. This arbitration provision is governed by the Federal Arbitration Act. Judgment may be entered on the arbitrator's award in any court of competent jurisdiction. All issues are for the arbitrator to decide, except that issues relating to the scope and enforceability of the arbitration provision and to the arbitrability of the dispute are for the court to decide. The arbitrator is bound by the terms of this provision.

Governing Law. The law of the state of your residence shall govern this Limited Warranty and any disputes between us except to the extent that such law is preempted by or inconsistent with applicable federal law.

Fees/Costs. You do not need to pay any fee to begin an arbitration. Upon receipt of your written demand for arbitration, LG will promptly pay all arbitration filing fees to the AAA unless you seek more than \$25,000 in damages, in which case the payment of these fees will be governed by the AAA Rules. Except as otherwise provided for herein, LG will pay all AAA filing, administration and arbitrator fees for any arbitration initiated in accordance with the AAA Rules and this arbitration provision. If you prevail in the arbitration, LG will pay your attorneys' fees and expenses as long as they are reasonable, by considering factors including, but not limited to, the purchase amount and claim amount. Notwithstanding the foregoing, if applicable law allows for an award of reasonable attorneys' fees and expenses, an arbitrator can award them to the same extent that a court would. If the arbitrator finds either the substance of your claim or the relief sought in the demand is frivolous or brought for an improper purpose (as measured by the standards set forth in Federal Rule of Civil Procedure 11(b)), then the payment of all arbitration fees will be governed by the AAA Rules. In such a situation, you agree to reimburse LG for all monies previously disbursed by it that are otherwise your obligation to pay under the AAA Rules. Except as otherwise provided for, LG waives any rights it may have to seek attorneys' fees and expenses from you if LG prevails in the arbitration.

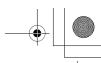
Hearings and Location. If your claim is for \$25,000 or less, you may choose to have the arbitration conducted solely on the basis of (1) documents submitted to the arbitrator, (2) through a telephonic hearing, or (3) by an in-person hearing as established by the AAA Rules. If your claim exceeds \$25,000, the right to a hearing will be determined by the AAA Rules. Any in-person arbitration hearings will be held at a









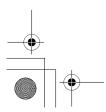


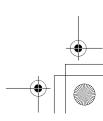
32 LIMITED WARRANTY

location within the federal judicial district in which you reside unless we both agree to another location or we agree to a telephonic arbitration.

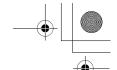
Opt Out. You may opt out of this dispute resolution procedure. If you opt out, neither you nor LG can require the other to participate in an arbitration proceeding. To opt out, you must send notice to LG no later than 30 calendar days from the date of the first consumer purchaser's purchase of the product by either: (i) sending an e-mail to optout@lge.com, with the subject line: "Arbitration Opt Out" or (ii) calling 1-800-980-2973. You must include in the opt out e-mail or provide by telephone: (a) your name and address; (b) the date on which the product was purchased; (c) the product model name or model number; and (d) the serial number (the serial number can be found (i) on the product; or (ii) online by accessing https://www.lg.com/us/support/repair-service/schedule-repair-continued and clicking on "Find My Model & Serial Number").

You may only opt out of the dispute resolution procedure in the manner described above (that is, by e-mail or telephone); no other form of notice will be effective to opt out of this dispute resolution procedure. Opting out of this dispute resolution procedure will not affect the coverage of the Limited Warranty in any way, and you will continue to enjoy the full benefits of the Limited Warranty. If you keep this product and do not opt out, then you accept all terms and conditions of the arbitration provision described above.











TERMS AND CONDITIONS

ARBITRATION NOTICE: THIS LIMITED WARRANTY CONTAINS AN ARBITRATION PROVISION THAT REOUIRES YOU AND LG TO RESOLVE DISPUTES BY BINDING ARBITRATION INSTEAD OF IN COURT. UNLESS THE LAWS OF YOUR PROVINCE OR TERRITORY DO NOT PERMIT THAT, OR, IN OTHER IURISDICTIONS, IF YOU CHOOSE TO OPT OUT, IN ARBITRATION, CLASS ACTIONS AND IURY TRIALS ARE NOT PERMITTED. PLEASE SEE THE SECTION TITLED "PROCEDURE FOR RESOLVING DISPUTES" BELOW.

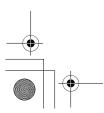
Should your LG Refrigerator ("Product") fail due to a defect in materials or workmanship under normal and proper use, during the warranty period set forth below, LG Electronics Canada, Inc. ("LGECI") will, at its option, repair or replace the Product upon receipt of proof of the original retail purchase. This limited warranty is valid only to the original retail purchaser of the Product and applies only to a Product distributed, purchased and used within Canada, as determined at the sole discretion of LGECI.

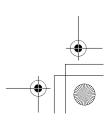
WARRANTY PERIOD (Note: If the original date of purchase cannot be verified, the warranty will begin sixty (60) days from the date of manufacture)			
Refrigerator	Sealed System (Conder Tube and E	Linear / Inverter Compressor	
One (1) year from the date of original retail purchase	One (1) year from the date of original retail purchase	Seven (7) years from the date of original retail purchase	Ten (10) years from the date of original retail purchase
Parts and Labor (internal/ functional parts only)	Parts and Labor	Parts only (Consumer will be charged for labor)	Part only (Consumer will be charged for labor)

- Replacement products and parts are warranted for the remaining portion of the original warranty period or ninety (90) days, whichever is greater.
- · Replacement products and parts may be new, reconditioned, refurbished, or otherwise factory remanufactured, all at the sole discretion of LGECI.
- Proof of original retail purchase specifying the Product model and date of purchase is required to obtain warranty service under this Limited Warranty.

LGECI'S SOLE LIABILITY IS LIMITED TO THE LIMITED WARRANTY SET OUT ABOVE. EXCEPT AS EXPRESSLY PROVIDED ABOVE, LGECI MAKES NO. AND HEREBY DISCLAIMS, ALL OTHER WARRANTIES AND CONDITIONS RESPECTING THE PRODUCT, WHETHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. AND NO REPRESENTATIONS SHALL BE BINDING ON LGECI. LGECI DOES NOT AUTHORIZE ANY PERSON TO CREATE OR ASSUME FOR IT ANY OTHER WARRANTY OBLIGATION OR LIABILITY IN CONNECTION WITH THE PRODUCT. TO THE EXTENT THAT ANY WARRANTY OR CONDITION IS IMPLIED BY LAW, IT IS LIMITED TO THE WARRANTY PERIOD SET OUT ABOVE. UNDER NO CIRCUMSTANCES SHALL LGECI, THE MANUFACTURER OR DISTRIBUTOR OF THE PRODUCT, BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL, DIRECT, INDIRECT, PUNITIVE OR EXEMPLARY DAMAGES, INCLUDING, WITHOUT LIMITATION, LOSS OF GOODWILL, LOST PROFITS, LOSS OF ANTICIPATED PROFITS, LOST REVENUE, LOSS OF USE, OR ANY OTHER DAMAGE, WHETHER ARISING DIRECTLY OR INDIRECTLY FROM ANY CONTRACTUAL BREACH, FUNDAMENTAL BREACH, TORT OR OTHERWISE, OR FROM ANY ACTS OR OMISSIONS. LGECI'S TOTAL LIABILITY, IF ANY, SHALL NOT EXCEED THE PURCHASE PRICE PAID BY YOU FOR THE PRODUCT.

This Limited Warranty gives you specific legal rights. You may also have other rights that vary from province to province depending on applicable provincial laws. Any term of this Limited Warranty that negates or varies any implied condition or warranty under provincial law is severable where it conflicts with such provincial law without affecting the remainder of this warranty's terms.









34 LIMITED WARRANTY

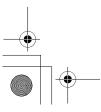
THIS LIMITED WARRANTY DOES NOT COVER:

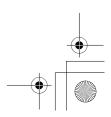
- Service trips to i) deliver, pick up, or install or; educate on how to operate the Product; ii) correct wiring or plumbing: or iii) correct unauthorized repairs or installations of the Product:
- Damage or failure of the Product to perform during power failures and interrupted or inadequate electrical service:
- Damage or failure caused by leaky or broken water pipes, frozen water pipes, restricted drain lines, inadequate or interrupted water supply or inadequate supply of air;
- Damage or failure resulting from operating the Product in a corrosive atmosphere or contrary to the instructions outlined in the Product's owner's manual;
- Damage or failure to the Product caused by accidents, pests and vermin, lightning, wind, fire, floods, acts of God, or any other causes beyond the control of LGECI or the manufacturer;
- Damage or failure resulting from misuse, abuse, improper installation, repair, or maintenance of the Product. Improper repair includes use of parts not authorized or specified by LGECI. Improper installation or maintenance includes installation or maintenance contrary to the Product's owner's manual:.
- Damage or failure caused by unauthorized modification or alteration of the Product, or if used for other than the intended household purpose/use of the Product, or damage or failure resulting from any water leakage due to improper installation of the Product;
- Damage or failure caused by incorrect electrical current, voltage or plumbing codes;
- Damage or failure caused by use that is other than normal household use, including, without limitation, commercial or industrial use, including use in commercial offices or recreational facilities, or as otherwise outlined in the Product's owner's manual;
- Damage or failure caused by the use of any accessories, components or cleaning products, including, without limitation, water filters, that are not approved/authorized by LGECI;
- Replacement of the water filter cartridge due to water pressure that is outside the specified operating range or due to excessive sediment in the water supply;
- Damage or failure caused by transportation and handling, including scratches, dents, chips and/or other damage to the finish of the Product, unless such damage results from defects in materials or workmanship and is reported to LGECI within one (1) week of delivery of the Products;
- · Damage or missing items to any display, open box, refurbished or discounted Product;
- Refurbished Product or any Product sold "As Is", "Where Is", "With all Faults", or any similar disclaimer;
- · Products with original serial numbers that have been removed, altered or cannot be readily determined at the discretion of LGECI:
- Increases in utility costs and additional utility expenses in any way associated with the Product;
- Any noises associated with normal operation of the Product;
- Replacement of light bulbs, filters, fuses or any other consumable parts;
- Replacement of any part that was not originally included with the Product;
- · Costs associated with removal and/or reinstallation of the Product for repairs; and
- · Shelves, door bins, drawers, handle and accessories to the Product, except for internal/functional parts covered under this Limited Warranty.
- Coverage for "in Home" repairs, for products in-warranty, will be provided if the Product is within a 150 km radius from the nearest authorized service center (ASC), as determined by LG Canada. If your Product is located outside a 150 km radius from a ASC, as determined by LG Canada, it will be your responsibility to bring the Product, at your sole expense, to the ASC for in-warranty repair.

All costs and expenses associated with the above excluded circumstances, listed under the heading, This Limited Warranty Does Not Cover, shall be borne by the consumer.

TO OBTAIN WARRANTY SERVICE AND ADDITIONAL INFORMATION, PLEASE CALL OR VISIT OUR WEBSITE:

Call 1-888-542-2623 and select the appropriate option from the menu, or visit our website at http:// www.lg.com















PROCEDURE FOR RESOLVING DISPUTES:

EXCEPT WHERE PROHIBITED AT LAW. ALL DISPUTES BETWEEN YOU AND LG ARISING OUT OF OR RELATING IN ANY WAY TO THIS LIMITED WARRANTY OR THE PRODUCT SHALL BE RESOLVED EXCLUSIVELY THROUGH BINDING ARBITRATION, AND NOT IN A COURT OF GENERAL JURISDICTION. EXCEPT WHERE PROHIBITED AT LAW, YOU AND LG BOTH IRREVOCABLY AGREE TO WAIVE THE RIGHT TO A JURY TRIAL AND TO BRING OR PARTICIPATE IN A CLASS ACTION.

Definitions. For the purposes of this section, references to "LG" mean LG Electronics Canada, Inc., its parents, subsidiaries and affiliates, and each of their officers, directors, employees, agents, beneficiaries. predecessors in interest, successors, assigns and suppliers; references to "dispute" or "claim" shall include any dispute, claim or controversy of any kind whatsoever (whether based in contract, tort, statute, regulation, ordinance, fraud, misrepresentation or any other legal or equitable theory) arising out of or relating in any way to the sale, condition or performance of the product or this Limited Warranty.

Notice of Dispute. In the event you intend to commence an arbitration proceeding, you must first notify LG in writing at least 30 days in advance of initiating the arbitration by sending a letter to LGECI Legal Team at 20 Norelco Drive, North York, Ontario, Canada M9L 2X6 (the "Notice of Dispute"). You and LG agree to engage in good faith discussions in an attempt to amicably resolve your claim. The notice must provide your name, address, and telephone number; identify the product that is the subject of the claim; and describe the nature of the claim and the relief being sought. If you and LG are unable to resolve the dispute within 30 days of LG's receipt of the Notice of Dispute, the dispute shall be resolved by binding arbitration in accordance with the procedure set out herein. You and LG both agree that, during the arbitration proceeding, the terms (including any amount) of any settlement offer made by either you or LG will not be disclosed to the arbitrator until the arbitrator determines the dispute.

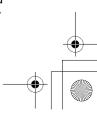
Agreement to Binding Arbitration and Class Action Waiver. Upon failure to resolve the dispute during the 30 day period after LG's receipt of the Notice of Dispute, you and LG agree to resolve any claims between you and LG only by binding arbitration on an individual basis, unless you opt out as provided below, or you reside in a jurisdiction that prevents full application of this clause in the circumstances of the claims at issue (in which case if you are a consumer, this clause will only apply if you expressly agree to the arbitration). To the extent permitted by applicable law, any dispute between you and LG shall not be combined or consolidated with a dispute involving any other person's or entity's product or claim. More specifically, without limitation of the foregoing, except to the extent such a prohibition is not permitted at law, any dispute between you and LG shall not under any circumstances proceed as part of a class or representative action. Instead of arbitration, either party may bring an individual action in small claims court, but that small claims court action may not be brought on a class or representative basis except to the extent this prohibition is not permitted at law in your province or territory of jurisdiction as it relates to the claims at issue between you and LG.

Arbitration Rules and Procedures. To begin arbitration of a claim, either you or LG must make a written demand for arbitration. The arbitration will be private and confidential, and conducted on a simplified and expedited basis before a single arbitrator chosen by the parties under the provincial or territorial commercial arbitration law and rules of the province or territory of your residence. You must also send a copy of your written demand to LG at LG Electronics, Canada, Inc., Attn: Legal Department- Arbitration, 20 Norelco Drive, North York, Ontario M9L 2X6. This arbitration provision is governed by your applicable provincial or territorial commercial arbitration legislation. Judgment may be entered on the arbitrator's award in any court of competent jurisdiction. All issues are for the arbitrator to decide, except that, issues relating to the scope and enforceability of the arbitration provision and to the arbitrability of the dispute are for the court to decide. The arbitrator is bound by the terms of this provision.

Governing Law. The law of the province or territory of your purchase shall govern this Limited Warranty and any disputes between you and LG except to the extent that such law is preempted by or inconsistent with applicable federal or provincial/territorial law. Should arbitration not be permitted for any claim, action, dispute or controversy between you and LG, you and LG attorn to the exclusive jurisdiction of the courts of the province or territory of your purchase for the resolution of the claim, action, dispute or controversy between you and LG.

Fees/Costs. You do not need to pay any fee to begin an arbitration. Upon receipt of your written demand for arbitration, LG will promptly pay all arbitration filing fees unless you seek more than \$25,000 in damages, in which case the payment of these fees will be governed by the applicable arbitration rules. Except as otherwise provided for herein, LG will pay all filing, administration and arbitrator fees for any arbitration initiated in accordance with the applicable arbitration rules and this arbitration provision. If you prevail in the arbitration, LG will pay your attorneys' fees and expenses as long as they are reasonable, by







36 LIMITED WARRANTY



considering factors including, but not limited to, the purchase amount and claim amount. Notwithstanding the foregoing, if applicable law allows for an award of reasonable attorneys' fees and expenses, an arbitrator can award them to the same extent that a court would. If the arbitrator finds either the substance of your claim or the relief sought in the demand is frivolous or brought for an improper purpose (as measured by the applicable laws), then the payment of all arbitration fees will be governed by the applicable arbitration rules. In such a situation, you agree to reimburse LG for all monies previously disbursed by it that are otherwise your obligation to pay under the applicable arbitration rules. Except as otherwise provided for, LG waives any rights it may have to seek attorneys' fees and expenses from you if LG prevails in the arbitration.

Hearings and Location. If your claim is for \$25,000 or less, you may choose to have the arbitration conducted solely (1) on the basis of documents submitted to the arbitrator, (2) through a telephonic hearing, or (3) by an in-person hearing as established by the applicable arbitration rules. If your claim exceeds \$25,000, the right to a hearing will be determined by the applicable arbitration rules. Any inperson arbitration hearings will be held at the nearest, most mutually-convenient arbitration location available within the province or territory in which you reside unless you and LG both agree to another location or agree to a telephonic arbitration.

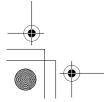
Severability and Waiver. If any portion of this Limited Warranty (including these arbitration procedures) is unenforceable, the remaining provisions will continue in full force and effect to the maximum extent permitted by applicable law. Should LG fail to enforce strict performance of any provision of this Limited Warranty (including these arbitration procedures), it does not mean that LG intends to waive or has waived any provision or part of this Limited Warranty.

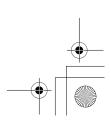
Opt Out.You may opt out of this dispute resolution procedure. If you opt out, neither you nor LG can require the other to participate in an arbitration proceeding. To opt out, you must send notice to LG no later than 30 calendar days from the date of the first consumer purchaser's purchase of the product by either (i) sending an e-mail to optout@lge.com, with the subject line: "Arbitration Opt Out;" or (ii) calling 1-800-980-2973. You must include in the opt out e-mail or provide by telephone: (a) your name and address; (b) the date on which the product was purchased; (c) the product model name or model number; and (d) the serial number (the serial number can be found (i) on the product; or (ii) online by accessing https://www.lg.com/ca_en/support/repair-service/schedule- repair and clicking on "Find My Model & Serial Number").

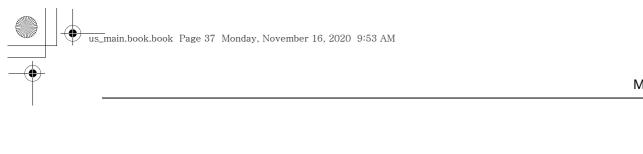
In the event that you "Opt Out", the law of the province or territory of your residence shall govern this Limited Warranty and any disputes between you and LG except to the extent that such law is preempted by or inconsistent with applicable federal or provincial/territorial law. Should arbitration not be permitted for any claim, action, dispute or controversy between you and LG, you and LG agree to attorn to the exclusive jurisdiction of the courts of the province or territory of your residence for the resolution of the claim, action, dispute or controversy between you and LG.

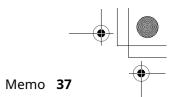
You may only opt out of the dispute resolution procedure in the manner described above (that is, by e-mail or telephone); no other form of notice will be effective to opt out of this dispute resolution procedure. Opting out of this dispute resolution procedure will not affect the coverage of the Limited Warranty in any way, and you will continue to enjoy the full benefits of the Limited Warranty. If you keep this product and do not opt out, then you accept all terms and conditions of the arbitration provision described above.

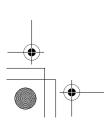
Conflict of Terms. In the event of a conflict or inconsistency between the terms of this Limited Warranty and the End User License Agreement ("EULA") in regards to dispute resolution, the terms of this Limited Warranty shall control and govern the rights and obligations of the parties and shall take precedence over the EULA.



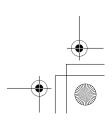






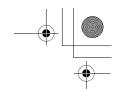


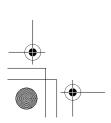




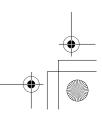


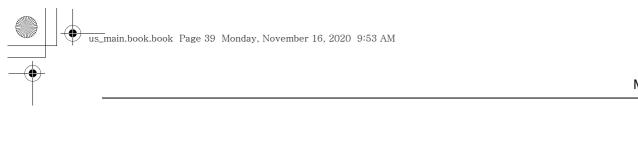




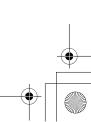




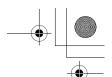




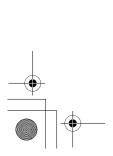




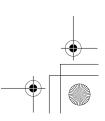


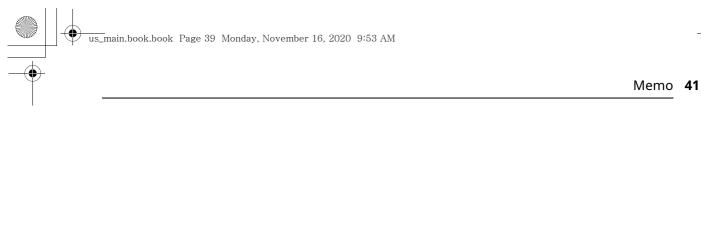


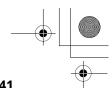


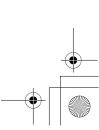


















42 Memo

