



ENGLISH

FRANÇAIS

ESPAÑOL

OWNER'S MANUAL

AIR CONDITIONER

Please read this manual carefully before operating your set and retain it for future reference.

Hydro Kit



MFL67086803
Rev.01_061520

www.lghvac.com
www.lg.com

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FOR YOUR RECORDS

Write the model and serial numbers here:

Model # _____

Serial # _____

You can find them on a label on the side of each unit.

Installer's Name _____

Purchased Date _____

■ Staple your receipt to this page in the event you need it to prove date of purchase or for warranty issues.



READ THIS MANUAL

Inside you will find many helpful hints on how to use and maintain your **Hydro Kit** properly. Just a little preventive care on your part can save you a great deal of time and money over the life of your product.

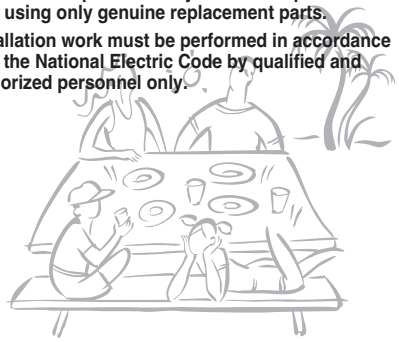
You'll find many answers to common problems in the chart of troubleshooting tips. If you review our chart of

Troubleshooting Tips first, you may not need to call for service at all.



PRECAUTION

- Contact the authorized service technician for repair or maintenance of this unit.
- Contact the installer for installation of this unit.
- **Hydro Kit** is not intended for use by young children or invalids without supervision.
- Young children should be supervised to ensure that they do not play with **Hydro Kit**.
- When the power cable is to be replaced, replacement work must be performed by authorized personnel only using only genuine replacement parts.
- Installation work must be performed in accordance with the National Electric Code by qualified and authorized personnel only.



IMPORTANT!

Please read this instruction sheet completely before installing the product.

This air conditioning system meets strict safety and operating standards. As the installer or service person, it is an important part of your job to install or service the system so it operates safely and efficiently.



WARNING

- Installation or repairs made by unqualified persons can result in hazards to you and others. Installation of all field wiring and components **MUST** conform with local building codes or, in the absence of local codes, with the National Electrical Code 70 and the National Building Construction and Safety Code or Canadian Electrical code and National Building Code of Canada.
- The information contained in the manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.
- Failure to carefully read and follow all instructions in this manual can result in equipment malfunction, property damage, personal injury and/or death.

CAUTION: Improper installation, adjustment, alteration, service or maintenance can void the warranty.

The weight of the condensing unit requires caution and proper handling procedures when lifting or moving to avoid personal injury. Use care to avoid contact with sharp or pointed edges.

Safety Precautions

- Always wear safety eye wear and work gloves when installing equipment.
- Never assume electrical power is disconnected. Check with meter and equipment.
- Keep hands out of fan areas when power is connected to equipment.
- R-410A causes frostbite burns.
- R-410A is toxic when burned.

NOTE TO INSTALLING DEALER: The Owners Instructions and Warranty are to be given to the owner or prominently displayed near the indoor Furnace/Air Handler Unit.



WARNING

When wiring:

Electrical shock can cause severe personal injury or death. Only a qualified, experienced electrician should attempt to wire this system.

- Do not supply power to the unit until all wiring and tubing are completed or reconnected and checked.
- Highly dangerous electrical voltages are used in this system. Carefully refer to the wiring diagram and these instructions when wiring. Improper connections and inadequate grounding can cause accidental injury or death.
- Ground the unit following local electrical codes.
- Connect all wiring tightly. Loose wiring may cause overheating at connection points and a possible fire hazard.
- The choice of materials and installations must comply with the applicable local/national or international standards.

When transporting:

Be careful when picking up and moving the indoor and outdoor units. Get a partner to help, and bend your knees when lifting to reduce strain on your back. Sharp edges or thin aluminum fins on the air conditioner can cut your finger.

When installing...

... **in a wall:** Make sure the wall is strong enough to hold the unit's weight.

It may be necessary to construct a strong wood or metal frame to provide added support.

... **in a room:** Properly insulate any tubing run inside a room to prevent "sweating" that can cause dripping and water damage to wall and floors.

... **in moist or uneven locations:** Use a raised concrete pad or concrete blocks provide a solid, level foundation for the outdoor unit. This prevents water damage and abnormal vibration.

... **in an area with high winds:** Securely anchor the outdoor unit down with bolts and a metal frame. Provide a suitable air baffle.

... **in a snowy area(for Heat Pump Model):** Install the outdoor unit on a raised platform that is higher than drifting snow. Provide snow vents.

When connecting refrigerant tubing

- Keep all tubing runs as short as possible.
- Use the flare method for connecting tubing.
- Check carefully for leaks before starting the test run.


When servicing

- Turn the power OFF at the main power box(mains) before opening the unit to check or repair electrical parts and wiring.
- Keep your fingers and clothing away from any moving parts.
- Clean up the site after you finish, remembering to check that no metal scraps or bits of wiring have been left inside the unit being serviced.

Safety Precautions

To prevent injury to the user or other people and property damage, the following instructions must be followed.

■ Incorrect operation due to ignoring instruction will cause harm or damage. The seriousness is classified by the following indications.

 **WARNING** This symbol indicates the possibility of death or serious injury.

 **CAUTION** This symbol indicates the possibility of injury or damage.

WARNING

- Always ground the product.
 - There is a risk of electric shock.
- Do not use a defective or underrated circuit breaker. Use this appliance on a dedicated circuit.
 - There is risk of fire or electric shock.
- Do not use a multi outlet. Always use this appliance on a dedicated circuit and breaker.
 - It can cause electric shock or fire.
- For electrical work, contact the dealer, seller, a qualified electrician, or an Authorized Service Center. Do not disassemble or repair the product by yourself.
 - There is risk of fire or electric shock.
- Always ground the product as per the wiring diagram. Do not connect the ground wire to gas or water pipes lightening rod or telephone ground wire.
 - There is risk of fire or electric shock.
- Install the panel and the cover of control box securely.
 - There is risk of fire or electric shock due to dust , water etc.
- Use the correctly rated breaker or fuse.
 - There is risk of fire or electric shock.
- Do not modify or extend the power cable. If the power cable or cord has scratches or skin peeled off or deteriorated then it must be replaced.
 - There is risk of fire or electric shock.
- For installation, removal or reinstall, always contact the dealer or an Authorized Service Center.
 - There is risk of fire, electric shock, explosion, or injury.
- Do not install the product on a defective installation stand. Be sure that the installation area does not deteriorate with age.
 - It may cause product to fall.
- Never install the outdoor unit on a moving base or a place from where it can fall down.
 - The falling outdoor unit can cause damage or injury or even death of a person.
- When the product is soaked (flooded or submerged) in water , contact an Authorized Service Center for repair before using it again.
 - There is risk of fire or electric shock.
- Be sure to check the refrigerant to be used. Please read the label on the product.
 - Incorrect refrigerant can prevent the normal operation of the unit.
- Don't use a power cord, a plug or a loose socket which is damaged.
 - Otherwise it may cause a fire or electrical shock.

- Do not touch, operate, or repair the product with wet hands.
 - There is risk of electric shock or fire.
- Do not place a heater or other heating appliances near the power cable.
 - There is risk of fire and electric shock.
- Do not allow water to run into electric parts. Install the unit away from water sources.
 - There is risk of fire, failure of the product, or electric shock.
- Do not store or use or even allow flammable gas or combustibles near the product.
 - There is risk of fire.
- Indoor/outdoor wiring connections must be secured tightly and the cable should be routed properly so that there is no force pulling the cable from the connection terminals.
 - Improper or loose connections can cause heat generation or fire.
- Safely dispose of the packing materials. Like screws, nails, batteries, broken things etc after installation or service and then tear away and throw away the plastic packaging bags.
 - Children may play with them and cause injury.
- Make sure to check that the power device is not dirty, loose or broken and then Turn on the power.
 - Dirty, loose or broken power device can cause electric shock or fire.
- In outdoor unit the step-up capacitor supplies high voltage electricity to the electrical components. Be sure to discharge the capacitor completely before conducting the repair work.
 - An charged capacitor can cause electrical shock.
- When installing the unit, use the installation kit provided with the product.
 - Otherwise the unit may fall and cause severe injury.
- Be sure to use only those parts which are listed in the service parts list. Never attempt to modify the equipment.
 - The use of inappropriate parts can cause an electrical shock, excessive heat generation or fire.
- Do not use the product in a tightly closed space for a long time. Perform ventilation regularly.
 - Oxygen deficiency could occur and hence harm your health.
- Do not open the front cover or grille of the product during operation. (Do not touch the electrostatic filter, if the unit is so equipped.)
 - There is risk of physical injury, electric shock, or product failure.
- If strange sounds, smell or smoke comes from product, immediately turn the breaker off or disconnect the power supply cable.
 - There is risk of electric shock or fire.
- Ventilate the product room from time to time when operating it together with a stove, or heating element etc.
 - Oxygen deficiency can occur and hence harm your health.
- Turn the main power off when cleaning or repairing the product.
 - There is risk of electric shock.
- Take care to ensure that nobody especially kids could step on or fall onto the outdoor unit.
 - This could result in personal injury and product damage.
- Take care to ensure that power cable could not be pulled out or damaged during operation.
 - There is risk of fire or electric shock.
- Do not place ANYTHING on the power cable.
 - There is risk of fire or electric shock.
- When flammable gas leaks, turn off the gas and open a window for ventilation before turning the product on.
 - Do not use the telephone or turn switches on or off. There is risk of explosion or fire.

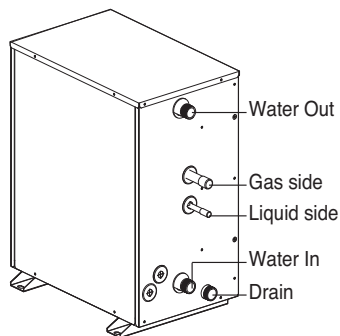
 **CAUTION**

- Two or more people must lift and transport the product.
 - Avoid personal injury.
- Do not install the product where it will be exposed to sea wind (salt spray) directly.
 - It may cause corrosion on the product.
- Keep level even when installing the product.
 - To avoid vibration or noise.
- Do not install the product where the noise or hot air from the outdoor unit could damage or disturb the neighborhoods.
 - It may cause a problem for your neighbors and hence dispute.
- Always check for gas (refrigerant) leakage after installation or repair of product.
 - Low refrigerant levels may cause failure of product.
- Do not use the product for special purposes, such as preserving foods, works of art, etc. It is a consumer Hydro Kit, not a precision refrigeration system.
 - There is risk of damage or loss of property.
- Do not block the inlet or outlet of air flow.
 - It may cause product failure.
- Use a soft cloth to clean. Do not use harsh detergents, solvents or splashing water etc .
 - There is risk of fire, electric shock, or damage to the plastic parts of the product.
- Do not step on or put anything on the product. (outdoor units)
 - There is risk of personal injury and failure of product.
- Do not insert hands or other objects through the air inlet or outlet while the product is operating.
 - There are sharp and moving parts that could cause personal injury.
- Be cautious when unpacking and installing the product.
 - Sharp edges could cause injury.
- If the refrigerant gas leaks during the repair, do not touch the leaking refrigerant gas.
 - The refrigerant gas can cause frostbite (cold burn)
- Do not tilt the unit when removing or uninstalling it.
 - The condensated water inside can spill.
- If the refrigerant gas leaks during the installation, ventilate the area immediately.
 - Otherwise it can be harmful for your health.
- Dismantling the unit, treatment of the refrigerant oil and eventual parts should be done in accordance with local and national standards.
- Do not expose your skin or kids or plants to the cool or hot air draft.
 - This could harm to your health.
- Use a firm stool or ladder when cleaning, maintaining or repairing the product at an height.
 - Be careful and avoid personal injury.
- The Limited Warranty is void and of no effect, and LG will have no liability hereunder to any Customer or third party, to the extent any of the following occur: acts, omissions, and conduct of any and all third parties including, but not limited to, the installing contractor and any repairs, service or maintenance by unauthorized or unqualified persons.
- Do not install the unit in potentially explosive atmospheres.

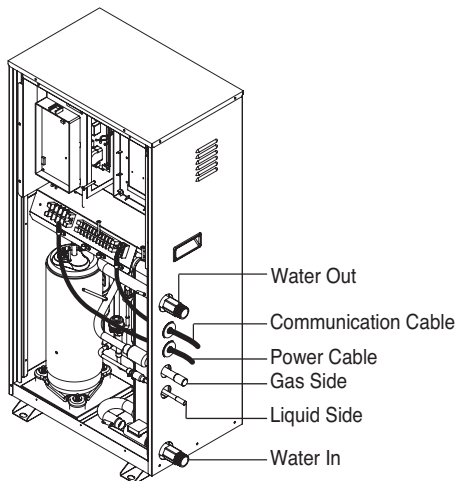
Product Introduction

Typical Installation Scene

<Type 1>



<Type 2>



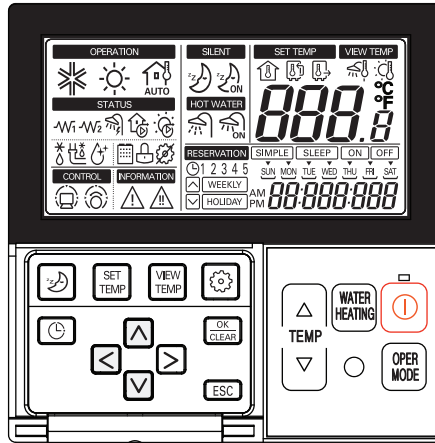
⚠ CAUTION

Use of power supply separate power for the Hydro-Kit. (Do not connect and use from the power terminal of the outdoor unit.)

NOTE

- The feature may be changed according to the type of model.

Remote Controller



Button	Name
	Change Temperature Button
	Water Heating Enable / Disable Button
	Power Button
	Operation Mode Selection Button
	Silent Mode On / Off Button
	Temperature Setting Mode Button
	Temperature View Mode Button
	Function Setting Button
	Programming Button
	Direction Button (Up, Down, Left, Right)
	OK / CLEAR button
	ESC Button

* Grey painted functions may not be operated and displayed.

Owner's Instruction

Monitoring Information



WATER PUMP

This icon indicates that the water pump is active.



AUXILIARY SOLAR THERMAL PUMP

This icon indicates that auxiliary solar thermal pump is active.

NOTE : As installation of auxiliary solar thermal pump is not compulsory but recommendatory according to field condition, this icon can be seen although no auxiliary solar thermal pump is installed.

•The feature may be changed according to the type of model.



DEFROSTING

This icon indicates that the defrost mode is active.

In space heating operation or Domestic Hot Water tank heating operation, freezing of the outdoor heat exchanger may be occur due to low outdoor temperature and humidity. If this risk occurs, the product goes into defrost operation. It reverses the cycle and takes heat from the indoor system to prevent freezing of the outdoor system. This mode is automatically operating.



MAINTAIN LOWEST TEMPERATURE

The purpose of this mode is maintaining the temperature to prevent damage by freezing of water pipe.



OUTDOOR

This icon indicates that the outdoor unit is active.



CHILD LOCK



NO FUNCTION



CENTRAL CONTROLLER

This icon indicates that the product is controlled by the central controller.



THERMOSTAT

This icon indicates connection with thermostat.



SLIGHT TROUBLE

This icon indicates that slight trouble occurs.



HEAVY TROUBLE

This icon indicates that heavy trouble occurs.

NOTE

• Some functions may not be supported, depending on the model.

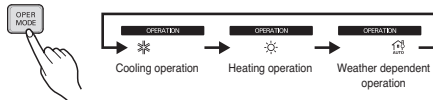
Mode Change

Turn on the product and select operation mode.

- 1 Press Power Button to turn on the product.



- 2 Press OPER MODE Button to select each operation mode.

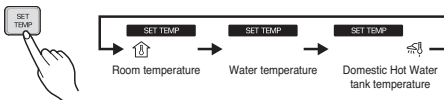


Operation Mode

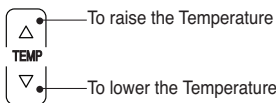
- Cooling Operation - The product yields cool water to use in under floor cooling or FCU cooling.
- Heating Operation - The product yields hot water to use in under floor heating or FCU heating.
- Weather dependent Heating Operation - In this mode, heating setpoint is automatically determined by pre-defined temperature profile.
- The feature may be changed according to the type of model.

Selecting Target Temperature

- 1 Press SET TEMP Button to select each operation mode.



- 2 Adjust desired temperature by pressing Change Temperature buttons on each mode.



NOTE

- ⬆ : Increase 1°C or 2°F per one time pressing
- ⬇ : Decrease 1°C or 2°F per one time pressing

- We can change the temperature range of each mode on installation setting mode. Please refer to Function Code 11 to 15.
- Room Temperature setting is available when Remote Room Air Sensor (sold separately) is installed. Please refer to Function Code 03.
- Domestic Hot Water tank temperature setting is available when Domestic Hot Water tank is installed.

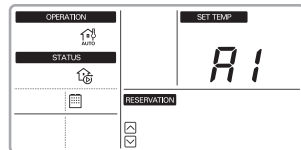
Weather-dependent Operation

This mode is only applied to heating.

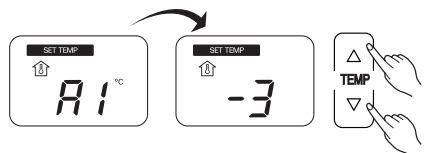
In order to save energy and to give highest comfort, setting temperature will follow outside temperature. If outdoor temperature decreases, heating capacity for the house will increase automatically in order to keep same room temperature. All parameters will be set by installer during start-up procedure and will be adapted to the site characteristic.

- 1 Press OPER MODE Button to select Weather-dependent operation mode.

: Weather Dependent operation icon



- 2 Adjust the desired temperature level by pressing Change Temperature buttons.



Ex) Decreasing temperature profile by 3°C(3°F)(based on room air temperature)

<Temperature adjust step (unit : °C(°F))>

-5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5

← Cold Hot →

View Temperature

- Press repeatedly View Temperature Button to select each Temperature. (Whenever press View Temperature button, the room temperature will be displayed during 5 seconds.)



VIEW TEMP : View Room Temperature



VIEW TEMP : View Inlet Temperature



VIEW TEMP : View Outlet Temperature



VIEW TEMP : View Domestic Hot Water Temperature (ONLY displayed when Domestic Hot Water heating mode)



VIEW TEMP : View Solar Thermal Temperature (ONLY displayed when Domestic Hot Water heating mode)



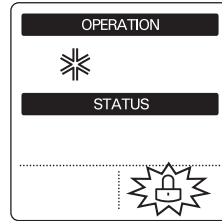
Temperature	Temperature Range	Displayed as
Air	below 11°C(51°F)	Lo
	11°C(51°F) ~ 39°C(102°F)	actual temperature
	above 39°C(102°F)	Hi
Water	below 0°C(32°F) [*below 40°C(104°F)]	Lo
	0°C(32°F) ~ 92°C(197°F) [*40°C(104°F) ~ 120°C(248°F)]	actual temperature
	above 92°C(197°F) [*above 120°C(248°F)]	Hi

[* : Solar Thermal Temperature]

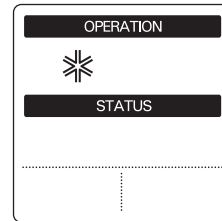
Child Lock


This function is to prevent children or other people from using controller.

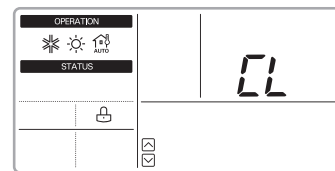
- Press Function Setting Button to enter user setting mode. (The segment will be flashed)




- Press OK/CLEAR button to finish the selection. The segment will disappear.



- During Child Lock,  icon and 'CL' will be displayed during 3 seconds whenever entering any kind of buttons except for view temperature button and OK/CLEAR button.



- To release this setting, press function Setting button until  icon flashes and then enter OK/CLEAR button.



Error code display

When the error is occurs on indoor unit, the error code will be displayed on remote controller.

Slight trouble

A problem is found inside the indoor unit. In most case, this trouble is concerned with sensor problems. In this case, Hydro Kit can operate in an emergency mode (only Heating operation).



Heavy trouble

A problem is found inside the outdoor unit.



Critical error

On critical error, the product will stop unconditionally.

At this time, CH' and error code No. keep display by turns.



Setting Current Time

You can set current time.

- 1 Keep pressing programming button twice successively to enter setting current time mode.



- 2 Press left, right button to adjust the current day.



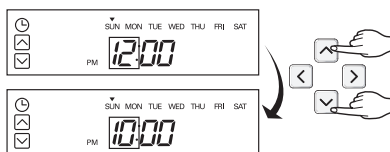
- 3 Press down button to move to AM/PM part and adjust it. (The AM/PM segment will be flashed)



- 4 Press right button to move to "Hour" part. (the "Hour" segment will be flashed)



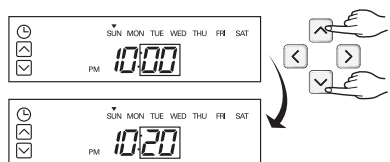
- 5 Press up, down button to adjust the Hour.



- 6 Press right button to move to "Minute" part. (the "Minute" segment will be flashed)



- 7 Press up, down button to adjust the Minute.



- 8 If you finish the setting, press OK/CLEAR button.



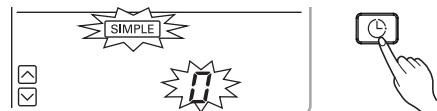
- 9 Press ESC button to exit or system will automatically release without any input 25 seconds.



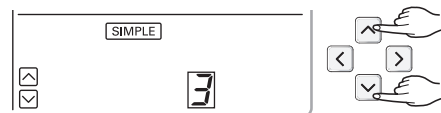
Programming : Setting Simple Reservation

You can easily turn-on reservation. (ONLY enable when unit is stand-by.)

- 1 Press programming button to enter the Programming mode. (the segment will be flashed)



- 2 Press up, down button to adjust the reservation time.



- 3 If you finish the setting, press OK/CLEAR button to complete programming



- 4 Press ESC button to exit or system will automatically release without any input after 25 seconds.



Programming : Setting Sleep Reservation

You can easily turn-off(sleep) reservation. (ONLY enable when unit is operating.)

- 1 Press programming button to enter the Programming mode. Press Programming button repeatedly to select [sleep reservation]. (the segment flashing)



- 2 Press up, down button to adjust the reservation time.



- 3 If you finish the setting, press OK/CLEAR button to complete programming.



- 4 Press ESC button to exit or system will automatically release without any input after 25 seconds.



Programming : Setting ON Reservation

This function is able to turn-on after a setting time.

- 1 Press programming button to enter the Programming mode. Press Programming button repeatedly to select [on reservation]. (the segment flashing)



- 2 Press up, down button to adjust AM/PM.



- 3 Press right button to move to "Hour" part. (the "Hour" segment will be flashed)



- 4 Press up, down button to adjust the Hour.



- 5 Press right button to move "Minute" part. (the "Minute" segment will be flashed)



- 6 Press up, down button to adjust the Minute.



- 7 If you finish the setting, press OK/CLEAR button to complete programming.



- 8 Press ESC button to exit or system will automatically release without any input after 25 seconds.



Programming : Setting OFF Reservation

This function is able to turn-off after a setting time.

- 1 Press programming button to enter the Programming mode. Press Programming button repeatedly to select [off reservation]. (the segment flashing)



- 2 Press up, down button to adjust AM/PM.



- 3 Press right button to move to "Hour" part. (the "Hour" segment will be flashed)



- 4 Press up, down button to adjust the Hour.



- 5 Press right button to move to "Minute" part. (the "Minute" segment will be flashed)



- 6 Press up, down button to adjust the Minute.



- 7 If you finish the setting, press OK/CLEAR button to complete programming.



- 8 Press ESC button to exit or system will automatically release without any input after 25 seconds.



Programming : Weekly Reservation

The weekly reservation is active after setting current time.

1 Press programming button to enter the Programming mode. Press Programming button repeatedly to select [Weekly reservation]. (the segment flashing)



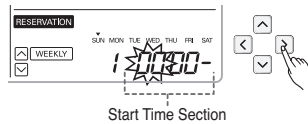
2 Press left, right button to adjust the current day.



3 Press up, down button to adjust the action number.



4 Press right button to move to "Hour" part on ON Time section. (The "Hour" segment will be flashed)



5 Press up, down button to adjust the Hour on Start Time section.



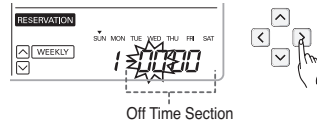
6 Press right button to move to "Minute" part on Start Time section. (The "Minute" segment will be flashed)



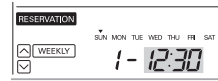
7 Press up, down button to adjust the Minute on Start Time section.



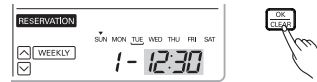
8 Press right button to move to "Hour" part on OFF Time section. (The "Hour" segment will be flashed)



9 Please refer to the process from No.5 to No.7 for setting OFF Time. It is the same method.



10 If you finish the setting, press OK/CLEAR button to complete programming. The under bar segment will be created, when finished.



11 Please refer to the process from No.2 to No.10 for setting other day weekly program. It is the same method.



12 Press exit button to ESC or system will automatically release without any input after 25 seconds.

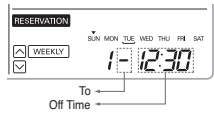
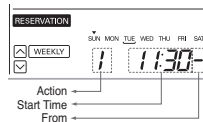


NOTE

Description of weekly reservation

<Start Time Section>

<Off Time Section>



<Start Time Section>

<Off Time Section>

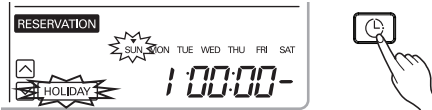


* Two actions per weekday can be programmed, in total 14 actions

Programming : Holiday Reservation

This function is to automatically stop the machine working on some days.

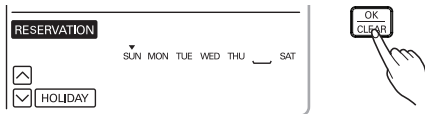
- 1 Press programming button to enter the Programming mode. Press Programming button repeatedly to select [Holiday reservation]. (the segment flashing)



- 2 Press left, right button to adjust the holiday.



- 3 When you press OK/CLEAR button after finishing the selection, the day selected will disappear.



- 4 Press ESC button to exit or system will automatically release without any input after 25 seconds.



Using Thermostat

The term "thermostat", which is widely used in this chapter, is a kind of 3rd party accessory. LG Electronics does not supply thermostat. but it can be supplied by 3rd party manufacturers.

Room thermostat can be used for easy and convenience control. To utilize thermostat more efficiently and correctly, this chapter presents information about using thermostat.

⚠ CAUTION





1. Some electro-mechanical type thermostat has internal delay time to protect compressor. In that case, mode change can takes time more than user's expectation. Please read thermostat manual carefully if the product does not response quickly.
2. Setting temperature range by thermostat can be different with that of the product. The heating or cooling set temperature should be chosen within the setting temperature range of the product.

How to use Thermostat

To find how to turn on and off, how to set target temperature, how to change operating mode, etc, please refer to thermostat operating manual provided by thermostat manufacturer.




Operating Thermostat with Remote Controller

Following features are permitted when thermostat is installed :

-  SET TEMP button
-  VIEW TEMP button
-  Temperature adjust button (*)
-  Domestic Hot Water heating Enable / Disable

(*) : The product does not turn on / off according to the setting temperature at the remote controller. It turns on / off according to the thermostat signal.

Following features are NOT permitted when thermostat is installed :

-  Operating mode (cooling/ heating/ weather-dependent) selection
-  Time scheduling
-  Operation On / Off

Emergency Operation

Definition of terms

- Trouble : a problem which can stop system operation, and can be resumed temporarily under limited operation without certificated professional's assist.
- Error : problem which can stop system operation, and can be resumed ONLY after certificated professional's check.
- Emergency mode : temporary heating operation while system met Trouble.

Objective of introducing 'Trouble'

- Not like airconditioning product, hydro kit is generally operated in whole winter season without any system stopping.
- If system found some problem, which is not critical to system operating for yielding heating energy, the system can temporarily continue in emergency mode operation with end user's decision.

Classified Trouble

- Trouble is classified into two levels according to the seriousness of the problem : Slight Trouble and Heavy trouble
- Slight Trouble : a problem is found inside the indoor unit. In most case, this trouble is concerned with sensor problems. The outdoor unit is operating under emergency mode operation condition which is configured by DIP switch No. 4 of the indoor unit PCB.
- Heavy trouble : a problem is found inside the outdoor unit.

- Option Trouble : a problem is found for option operation such as water tank heating. In this trouble, the troubled option is assumed as if it does not cause in the Product.

Emergency operation level

- When system met trouble, it stops operation and waits for user's decision : Calling service center or starting emergency operation.
- To start emergency operation, user simply pushes ON / OFF button once more.
- Two different levels are prepared for emergency operation : High temperature cycle and low temperature cycle.
- In emergency operation mode, user can not adjust target temperature.




<Type 1>


	DIP Switch	Target Leaving Water Temperature	Target Room Air Temperature	Target Domestic Hot Water Temperature
High temperature cycle	OFF	50°C(122°F)	24°C(75°F)	50°C(122°F)
Low temperature cycle	ON	30°C(86°F)	19°C(66°F)	50°C(122°F)

<Type 2>

	Dip Switch (#4)	Target Leaving Water Temperature	Target Room Air Temperature	Target Domestic Hot Water Temperature
High temperature cycle	OFF	70°C(158°F)	24°C(75°F)	70°C(158°F)
Low temperature cycle	ON	50°C(122°F)	19°C(66°F)	50°C(122°F)

Following features are permitted in emergency operation :




-  Operation On/Off
-  VIEW TEMP button(*)
-  Temperature adjust button (*)

-  Domestic Hot water heating Enable / Disable

(*) : Temperature measured by failed sensor is displayed as '- -'.

The product does not turn on / off according to the setting temperature at the remote controller. It turns on / off according to the thermostat signal.

Following features are NOT permitted in emergency operation :

-  Operating mode (Heating/ Weather-dependent) selection
-  Time scheduling
-  SET TEMP button

Duplicated trouble : Option trouble with Slight or Heavy trouble

- If option trouble occurs with slight (or heavy) trouble at the same time, the system puts higher priority to slight (or heavy) trouble and operates as if slight (or heavy) trouble occurs.
- Therefore, sometimes Domestic Hot water heating can be impossible in emergency operation mode. When Domestic Hot water is not warming up while emergency operation, please check if Domestic Hot water sensor and related wiring are all Ok.

Emergency operation is not automatically restarted after main electricity power is reset.

- In normal condition, the product operating information is restored and automatically restarted after main electricity power is reset.
- But in emergency operation, automatic re-start is prohibited to protect the product.
- Therefore, user must restart the product after power reset when emergency operation has been running.

Maintenance and Service

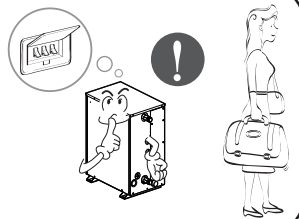
Maintenance activities

In order to ensure optimal availability of the unit, a number of checks and inspections on the unit and the field wiring have to be carried out at regular intervals, preferably yearly. This maintenance should be carried out by your local agreed technician.

When the unit is not going....

⚠ CAUTION

- If the product is not used for long time, we strongly recommend **NOT TO SWITCH OFF THE POWER SUPPLY** to the product.
- If power is not supplied, some special product-protecting actions (such as water pump anti-locking) will not performed.



Call the service immediately in the following situations

1. Anything abnormal such as burning smell, loud noise etc. happen. Stop the unit and turn the breaker off. Never try to repair by yourself or restart the system in such cases.
2. Main power cord is too hot or damaged.
3. Error code is generated by self diagnosis.
4. Water leaks from indoor unit.
5. Any switch, breaker (safety, earth) or fuse fails to work properly

**User must carry routine checkup & cleaning to avoid unit's poor performance.
In case of special situation, the job must be carried out by the only service person.**

Operational instructions

- Do not disconnect the power supply of Hydro Kit during the operation.
Stop the Hydro Kit followed by outdoor unit and then only remove the power supply.

⚠ WARNING

If you remove the power supply of the Hydro Kit in the mid of operation, it will leads to damage of the product by freezing and bursting of Plate type Heat Exchanger.

- Do not remove the power supply even at the occurrence of "CH14" Error.
As the error is due to the shortage of water flow, please eliminate any sludge and scales inside the water tubes to ensure free water pumping, remove foreign particles(dust, sand, trash, rusted pieces) from the water tubes along with cleaning the strainer.
After cleaning the strainer, to remove the error message (not displayed), turn off the outdoor unit followed by Hydro Kit and then disconnect power supply of Hydro Kit. And then connect power supply and restart the unit for the normal operation.

⚠ WARNING

The service payment will be charged to end user if the system failure is due to strainer blockage.
Strainer cleaning period: Once in every 3 months and whenever CH14 error occurs.

- If the system stopped and displaying any error message(CH ***) please follow below procedure.
Do not remove the power supply of the Hydro Kit. Contact L.G service center.
- Do not change the water pipes randomly. When changing the water pipes there is a possibility of foreign material entry and bubble formation as well. This leads to freezing of Plate type heat exchanger of Hydro Kit.
When it is essential to change the water pipes, proceed only after separating the pipes from Hydro Kit. The inner side of the new pipes must be washed thoroughly to remove the foreign materials and then connect the pipes with the Hydro Kit.

Troubleshooting Tips! Save time and money!

Check the following points before requesting repairs or service.... If the malfunction persist, please contact your dealer.

Case	Explanation
Hydro Kit does not operate.	<ul style="list-style-type: none"> • Have you made a mistake in timer operation? • Has the fuse blown or has the circuit breaker been tripped?
The room has a peculiar odor.	<ul style="list-style-type: none"> • Check that this is not a damp smell exuded by the walls, carpet, furniture or cloth items in the room.
Hydro Kit does not operate for about 3 minutes when restart.	<ul style="list-style-type: none"> • This is the protector of the mechanism. • Wait about three minutes and operation will begin.
Does not cool or heat effectively.	<ul style="list-style-type: none"> • The room may have been very hot when the Hydro Kit was first turned on. Allow time for it to cool down. • Has the setting temperature been set incorrectly?
The unit operation is noisy.	<ul style="list-style-type: none"> • Refrigerant flow sound <ul style="list-style-type: none"> - While the system is being started or stopping, sound from the refrigerant flow may be heard. • Sound for the indoor unit heat exchanger <ul style="list-style-type: none"> - During the cooling operation, a sound may be heard from the indoor unit heat exchanger due to water freezing or melting. • Water noise <ul style="list-style-type: none"> - During starting or stopping of the unit, noise can appear in water piping • During defrost <ul style="list-style-type: none"> - Noise can appear in unit due to defrosting of water.
Steam is raised in outdoor unit.	<ul style="list-style-type: none"> • Steam from outdoor heat exchanger <ul style="list-style-type: none"> - During defrosting operation, ice on the outdoor heat exchanger is melted, resulting in making steam.
Remote controller display is faint, or no display at all.	<ul style="list-style-type: none"> • Has the circuit breaker been tripped?

WARRANTY (USA)

ARBITRATION NOTICE: THIS LIMITED WARRANTY CONTAINS AN ARBITRATION PROVISION THAT REQUIRES YOU AND 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.

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 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.

WARRANTY (CANADA)

ARBITRATION NOTICE: THIS LIMITED WARRANTY CONTAINS AN ARBITRATION PROVISION THAT REQUIRES 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 JURISDICTIONS, IF 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.

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 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 in-person 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.



US	Please call the installing contractor of your product, as warranty service will be provided by them.
CANADA	Service call Number # : (888) LG Canada, (888) 542-2623 Numéro pour les appels de service : LG Canada, 1-888-542-2623