

# Olympia P324

## Professional Hand-held UHF FM 2-Way Radio

### User Guide

KEM-ML28201-02

OLYMPIA ®



**▲** Warning: This manual contains important safety and operating information. Please read, understand, and follow the instructions in this manual. Failure to do so could result in personal injury, death, and/or damage to your Olympia P324 radio, accessories and/or other property.

## ▲ Caution

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This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

Your Olympia radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as “Occupational Use Only”/“Controlled Use Only”; meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards.

This radio is NOT intended for use by the “General Population” in an uncontrolled environment.

**Important:** Your Olympia radio has been tested and complies with the FCC/IC RF exposure limits for “Occupational Use Only”/“Controlled Use Only”. In addition, your radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

- FCC OET Bulletin 65 Supplement C, Edition 01-01, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- IC RSS-102 Issue 2 Radio Frequency Exposure Compliance of Radiocommunication Apparatus.

- American National Standards Institute (C95.1 – 2005), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- American National Standards Institute (C95.3 – 2002), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave.
- IEEE Standard 1528-2003.

To ensure that your exposure to RF electromagnetic energy is within the FCC/IC allowable limits for “Occupational Use Only”/“Controlled Use Only”; always adhere to the following guidelines:

- DO NOT operate the radio without a proper 50 Ohm antenna attached, as this may damage the radio and may also cause you to exceed FCC/IC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio.
- DO NOT transmit for more than 50% of total radio use time (“50% duty cycle”). Transmitting more than 50% of the time can cause FCC/IC RF exposure compliance requirements to be exceeded. The radio is transmitting when the “TX indicator” light is red. You will cause the radio to transmit by pressing the “PTT” switch.

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- ALWAYS use Olympia authorized accessories (antennas, batteries, belt clips, speaker/microphones, etc). Use of unauthorized accessories can cause the FCC/IC RF exposure compliance requirements to be exceeded.
  - ALWAYS keep the antenna at least 1 inch (2.5 cm) away from the body when transmitting and only use the Olympia belt-clips, listed in this user manual, when attaching the radio to your belt, etc., to ensure FCC/IC RF exposure compliance requirements are not exceeded. To provide the recipients of your transmission the best sound quality, hold the antenna at least 2 inches (5 cm) from your mouth, and slightly off to one side.

The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to assure that this radio operates within the FCC/IC RF exposure limits of this radio.

### **Electromagnetic Interference/Compatibility**

During transmissions, your Olympia radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

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## **Important**

### **▲ CAUTION!**

**NEVER** hold the transceiver so that the antenna is very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting. The transceiver will perform best if the microphone is 2 to 4 inches (5 to 10 cm) away from the lips and the transceiver is vertical.

**NEVER** operate the transceiver with a headset or other audio accessories at high volume levels.

**NEVER** short the terminals of the battery pack.

**DO NOT** push the PTT key when not actually desiring to transmit.

**DO NOT** modify the transceiver for any reason.

**AVOID** using or placing the transceiver in direct sunlight or in areas with temperatures below -20° C – +60° C / -5° F – +140° F.

**KEEP** the transceiver from the heavy rain, and NEVER immerse it in water.

The transceiver construction is water resistant, not waterproof.

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**The use of non-Olympia battery packs/chargers may impair transceiver performance and invalidate the warranty.**

Changes or modifications not expressly approved by Olympia, may void the user's authority granted by the FCC/IC to operate this radio and should not be made. To comply with FCC/IC requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private Land Mobile and Fixed Services as certified by an organization representative of the user of those services.

Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the FCC/IC equipment authorization for this radio could violate FCC/IC rules.

Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

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## Licensing Information

Olympia Professional two-way radios operate on radio frequencies that are regulated by local government agencies. The regulatory agency in the USA is the Federal Communications Commission (FCC) and in Canada, Industry Canada (IC). To transmit on these frequencies, you are required to have a license issued by the FCC/IC. For Canadian users, you are required to have a license or other authorization under the Radio communication Act. Application is made with your local Industry Canada office. For other countries check with the local regulatory agency or your distributor to verify if this radio is approved for use and how you can obtain a license.

### FCC Application (USA Users)

Application is made available on FCC Main Form 601 and Schedules E, D and H. To obtain these FCC forms, request document 000601 which includes all forms and instructions. If you wish to have the document faxed, mailed, submitted online, or have questions, use the contact information on the next page.

Send fax to Fax-On Demand system at:	Call the FCC forms hotline at:	To apply for new / renew / modify existing license online, visit:	For questions regarding FCC license contact the FCC at:
1-202-418-0177	1-800-418-FORM 1-800-418-3676	Universal Licensing System (ULS) at <a href="http://wireless.fcc.gov/uls/index.htm?job=home">http://wireless.fcc.gov/uls/index.htm?job=home</a>	1-888-CALL-FCC 1-888-225-5322 Or: <a href="http://www.fcc.gov">http://www.fcc.gov</a>

Before filling out your application, you must decide which frequency(ies) you can operate on. See “Pre-programmed Channel Frequency Table”. For questions on determining the radio frequency, contact your dealer.

### IC Licensing Information (Canadian Users)

For information on obtaining a LMRS license in Canada, visit the following Website link to see a list of district and regional offices for Industry Canada’s Spectrum Management department:  
[http://www.canadabusiness.ca/servlet/ContentServer?pagename=CBSC\\_ON%2Fdisplay&lang=en&cid=1081944194346&c=Regs](http://www.canadabusiness.ca/servlet/ContentServer?pagename=CBSC_ON%2Fdisplay&lang=en&cid=1081944194346&c=Regs)

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## Packaging Content

Your P324 package includes: Radio, antenna, lithium-ion battery, charging base, charging adaptor, belt clip and user guide.

Available accessories sold separately: Headset with Push-to-Talk microphone and Stubby Antenna.



## Olympia P324 Controls



## Olympia P324 Display Screen

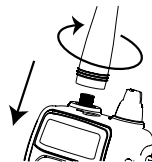


Icon	Definition
	RX signal strength indicator
	Busy channel lockout indicator <i>bcl</i>
	The current code is CTCSS Code
	The current code is CDCSS Code
	Indicates the squelch level
	Indicates the radio is scanning
	Indicates channel is not on scanned list
	Key-lock indicator
	Keypad Tone enabling indicator
	Channel or frequency display
	Code display
	Low TX Power (1W) indicator
	Repeater indicator
	Narrow band (12.5 kHz) indicator
	Battery Meter

## Basic Operations

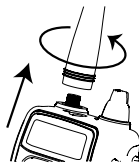
### Connecting the antenna

Align the base of the antenna onto the SMA connector and turn clockwise until snug. Do not over tighten.



### Disconnecting the antenna

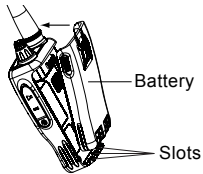
Turn the base of the antenna counter-clockwise to disconnect it from the radio.



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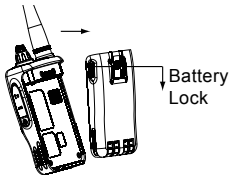
## Installing the battery

Align the bottom tabs of the battery with the slots located on the radio base. Push the upper back section of the battery towards the radio until the battery snaps into place.



## Removing the battery

Pull the battery locks downwards to release the battery from the radio.



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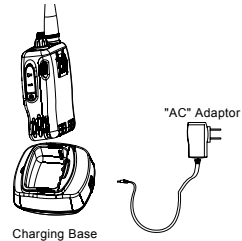
## Basic Operations

### Charging the battery

The radio is equipped with a charging base and a power supply adaptor.

To charge the battery with the radio attached:

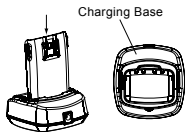
1. Place the Olympia charging base on a flat surface in a dry location.
2. Insert the AC adaptor cable connector into the port on the rear of the charging base.
3. Plug the AC adaptor into a power outlet.
4. Align the slots on the sides of the battery with the rails in the charging base.
5. Slide the radio into the charging base.





### Charging the battery only

1. Place the Olympia charging base on a flat surface in a dry location.
2. Insert the AC adaptor cable connector into the port on the rear of the charging base.
3. Plug the AC adaptor into a power outlet.
4. Align the slots on the sides of the battery with the rails in the charging base.
5. Slide the battery into the charging base.



### Charging Notes:

- Best charging performance: room temperature, 60 - 85° F (15-30° C).
- Charging base operating temperature range: 32 - 115° F (0 - 45° C).
- Charging base input voltage range specification: 12.0 - 16.0 VDC 450 mA maximum.

## Basic Operations

### Charging base LED Indicator

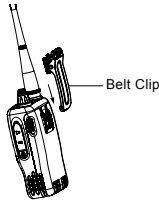
LED Indicator	Battery Condition	Action
Green-Yellow-Red	N/A	Normal power up sequence
Short Blinking Red	Open circuited battery	Clean contacts
	No battery inserted	Replace battery
Long Blinking Red	Bad battery	Replace battery
	Short circuit at terminals	Remove battery and disconnect AC power
Alternating Red/ Green	Overcharged Battery	Discharge battery completely before charging again
Continuous Red	Charging in process	Allow battery to complete charging
Continuous Green	Charging complete	Remove battery for use or leave on for charge maintenance

**Note:** A completely discharged battery may take up to 5 hours to completely charge.

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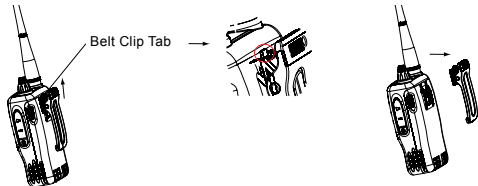
### Connecting the belt clip

Press the tab located on the inner top section of the belt clip, and slide the rails into the grooves on the back of the battery pack until the belt clip tab snaps into place.



### Removing the belt clip

Press the tab located at the top of the belt clip, and slide the belt clip upwards to remove.



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## Basic Operations

### Turning your radio on and off

To turn on the power:

Rotate the **PWR/VOL** knob clockwise until “beep” is heard. All icons and frequencies will appear on the screen.

To turn off the power:

Rotate the **PWR/VOL** knob counterclockwise. All displays will disappear and the radio is off.

### Adjusting the volume

Rotate **PWR/VOL** while holding down the **MON/FUNC** key until you reach a comfortable listening level.

Rotate **PWR/VOL** clockwise to increase the volume or counterclockwise to decrease the volume.

### Backlight

Depress the PTT key or wait for 5 seconds to inactivate the backlight.

### Monitor

Do not talk on a channel if someone else is talking on it.

To check for activity on a channel before you talk, press and hold the **MON/FUNC** key.

If you hear static, the channel is clear to use.

To exit the function, release the **MON/FUNC** key.

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### Selecting the channel

The radio has 10 pre-programmed channels (see Frequency table on page 31). The radio can be programmed with up to 32 channel frequencies. Press **UP** or **DOWN** to change the channel.

### Talking and listening


To communicate, all radios in your group must be set to the same channel and CTCSS\CDCSS codes.

To talk, press and hold the **PTT** key. The red TX indicator light glows continuously when transmitting.

To receive messages, release the **PTT** key.

For maximum clarity, hold the radio two to three inches away from your mouth and speak directly into the microphone. Do not cover the microphone while talking.

### Transmit power setting

The radio can transmit at 1 watt or 4 watts. When 1 watt is selected,  will appear on the display. When this icon is off, the radio will transmit with high power. High power operation may be restricted on some channels and is stated in your FCC license.


Press and hold the **SCAN** button for 2 seconds to switch the setting.

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## Basic Operations

### Scan

Use scanning to monitor channels and codes for transmissions or to find someone in your group who has accidentally changed channels. When priority scan feature is enabled, the priority channel will be scanned after every normal channel, regardless of whether the priority channel is added into the scan list.

To start scanning, briefly press the **SCAN** key. The scan indicator  will appear.

When the radio detects channel activity, it stops scanning and you can hear the transmission.

To respond to the transmission, press **PTT**.

If the scan stops on a channel that you don't want to listen to, briefly press the **UP** or **DOWN** button to resume scanning for the next active channel.

To exit the function, press the **SCAN** key again.

### Emergency call\Hands-free function

The emergency call key is used to call others for help when emergency events happen.

To enter the radio's emergency mode, hold down the **EMG** button for 2 seconds.

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The radio will alternately flash **EmB** and Channel number/Frequency. The radio will now alternate between 30 seconds of hands-free transmission and 30 seconds of hands-free receiving. This loop will continue until you exit the emergency mode.

To exit emergency mode, press the **PTT** button.

1. The busy channel lockout feature will be disabled during emergency mode.
2. The radio will transmit until the battery is completely discharged.
3. Settings of the emergency mode can be altered by the distributor using the configuration software.

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## Menu Operation

### Squelch Level Setting




The adjustable Squelch allows you to optimize the radio's sensitivity. It also allows you to increase the sensitivity and receive weaker signals. There are 5 sensitivity levels. The squelch level is indicated by the **SQ** icon and bar icons next to it on the display.

1. Press **MON/FUNC** until the current squelch level flashes and **SQ** appears.
2. Press **UP** or **DOWN** to increase or decrease the squelch level.
3. Press **PTT** to set or **MON/FUNC** to continue set up.

Level 1 is the most sensitive level, which means the radio can receive a very weak signal. While at level 5, the radio can only receive stronger signals. In some cases the latter is preferable to prevent sensitivity to numerous strong signals in adjacent channels that might interfere (intermodulation). This can be especially true in the case of an environment with a high density of users.



### Keypad Tone Setting

You may enable or disable the speaker key tones. You will hear the key tone each time a button is pushed.


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1. Press **MON/FUNC** until  appears. The current setting  flashes and  appears.
  2. Press **UP/DOWN** to turn on or off.
  3. Press **PTT** to set or **MON/FUNC** to continue set up.

### Roger Beep Setting

If this feature is enabled, the radio transmits a unique tone when you finish transmitting. In the same way as saying “Roger” or “Over”, it lets others know you are finished talking.



1. Press **MON/FUNC** until  appears. The current setting  flashes.
2. Press **UP/DOWN** to turn on or off.
3. Press **PTT** to set or **MON/FUNC** to continue set up.

### Busy Channel Lockout Setting

The busy channel lockout feature helps to prevent interruption of communication between other radios using the channel you selected. When you press PTT to transmit, the radio will generate a beep and  will appear to alert you that the channel you selected is busy.







## Menu Operation

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1. Press **MON/FUNC** until  appears. The current setting  flashes.
2. Press **UP/DOWN** to turn on or off.
3. Press **PTT** to set or **MON/FUNC** to continue set up.

### Scan List Setting

The current channel can be added to the scan list or deleted from the scan list.


1. Press **MON/FUNC** until  appears. The current setting  flashes.
2. Press **UP/DOWN** to select.  means add the channel to scan list and  will appear.  means delete the channel from scan list and  will appear.
3. Press **PTT** to set or **MON/FUNC** to continue set up.

### Priority Channel Setting

Any channel may be selected as the Priority Channel. Once you select a priority channel, activity will be checked more frequently when scanning.

1. Press **MON/FUNC** until **Pr** appears. The current setting flashes.
2. Press **UP/DOWN** to select the desired channel or **DF** to disable the function.
3. Press **PTT** to set or **MON/FUNC** to continue set up.

### Keypad Lock Setting

The keypad lock disables all the button functions except the **PTT**, **MON/FUNC** and **EMG**. When the keypad is locked, the  will appear in the display.

1. Press **MON/FUNC** until **L** appears. The current setting flashes.
2. Press **UP/DOWN** to turn on or off.
3. Press **PTT** or **MON/FUNC** to set.

To unlock the radio, press and hold **SCAN** for 3 seconds and until  is no longer displayed.

## Technical Specifications

GENERAL SPECIFICATIONS*	
Channel memories	32
CTCSS/CDCSS Codes	50/83
Frequency Band	406-470 MHz
Channel BW	12.5 or 25 kHz
LCD	13 Icons 8 digit frequency LCD Display 3 digit CTCSS value LCD Display 4 level RX strength indicator 5 level SQ indicator 3 level BAT indicator Back light
Battery Type	7.4V 1100mAh Li-ion
Antenna Connector	SMA top mount
Headset / Microphone Connector	Dual 3.5 mm / 2.5 mm
Battery Connector	Bottom Charging Contact
Controls	2 front mount buttons (up/down) 3 side buttons (PTT, Scan, Monitor) 1 top button (Emergency) 1 top rotary control (Volume, Power)
Power Switch	Rotary Knob
Channel Capacity	32
Charging base	Drop-In Type
Power Supply	Power Supply 100-240 VAC 50-60 Hz 150 mA

Dimensions (without antenna)	1.5 x 2.4 x 4.5 inches (38 x 62 x 114 mm)		
Weight (with battery pack)	7.9 oz (224 g)		
Frequency Stability vs. temperature	<2.5ppm		
Estimated Battery life (TX-RX-STBY duty cycle)	Power	10-10-80 duty cycle	5-5-90 duty cycle
	1 Watt	8hrs.	16hrs.
	4 Watt	5hrs.	9hrs.
FCC ID Designator / IC ID Designator	K7GP1808 / 2415B-P1808		

#### RECEIVER SPECIFICATIONS\*

Sensitivity (12 dB SINAD)	≤0.28uV
Adjacent Channel Selectivity	65dB/60dB (W/N Bandwidth)
Intermodulation	60dB
Spurious Rejection	70dB
Image Rejection	70dB
Audio Output Power	500mW
Audio Distortion	≤5% @ Rated output

#### TRANSMITTER SPECIFICATIONS\*

Modulation Designator 25 kHz 12.5 kHz	11K6F3E 6K12F3E
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## Technical Specifications

TX Output Power	4W/1W
Spurious Output	< 60 dBc
FM Hum and Noise	40dB
Adjacent Channel Power Ratio	65dB/60dB (W/N)
Modulated Audio Distortion	≤5% @ Rated Deviation
<b>ENVIRONMENTAL SPECIFICATIONS*</b>	
Ingress Protection Rating	IP52
Operating Temperature	-20° C - +60° C / -5° F - +140° F
Storage Temperature	-40° C - +65° C / -40° F - +150° F

\* All specifications subject to change without notice.

## Customizing your Radio

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Your radio can be customized to fit your specific needs. This can be done by your dealer or distributor using special configuration software. Each channel can be programmed for TX frequency, RX frequency, TX power level, CTCSS or CDCSS, TX bandwidth, Busy Channel Lock Out, Scan Enabled, and Priority Channel Status.

The configuration software allows setting the radio default Squelch level, TX time out value, Emergency Call time values, Radio ID, display of channel number or channel frequency, Power Save variables, and the Low Battery Alert.

### Pre-programmed Channel Frequency Table

Channel	Frequency	Code (Hz)
1	464.5000	67.0
2	464.5000	77.0
3	464.5000	88.5
4	464.5000	179.9
5	464.5000	OFF
6	464.5500	67.0
7	464.5500	82.5
8	464.5500	94.8
9	464.5500	179.9
10	464.5500	OFF

## Warranty

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### What does this warranty cover?

Giant International warrants the Olympia branded professional hand-held radios that it manufactures ("Products"), the Olympia branded or certified accessories sold for use with these Products that it manufactures ("Accessories") to be free from defects in materials and workmanship under normal usage for the period(s) outlined below.

This limited warranty is a customer's exclusive remedy, and applies to new Olympia branded Products and Accessories purchased by customers in the United States, which are accompanied by this written warranty.

**Product:** Two (2) years from the date of purchase by the first customer purchaser of the product unless otherwise provided for below. This excludes the battery.

**Accessories and batteries:** Ninety (90) days from the date of purchase by the first customer purchaser of the product.



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**Headsets:** One (1) year from the date of purchase by the first customer purchaser of the product.

***Products and Accessories that are repaired or replaced:***

The balance of the original warranty or for ninety (90) days from the date returned to the customer, whichever is longer.

**Who is covered?**

This warranty extends only to the first customer purchaser of the product. This warranty is not transferable.

**EXCLUSIONS**

**Normal wear and tear:** Periodic maintenance, repair and replacement of parts due to normal wear and tear are excluded from coverage.

**Batteries:** Only batteries whose fully charged capacity falls below 80% of their rated capacity and batteries that leak are covered by this limited warranty.

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**Warranty**

**Abuse and misuse:** Defects or damage that results from: (a) improper operation, storage, misuse or abuse, accident or neglect, such as physical damage (cracks, scratches, etc.) to the surface of the product resulting from misuse; (b) contact with liquid, water, rain, extreme humidity or heavy perspiration, sand, dirt or the like, extreme heat, or food; (outside of the specified IP52 rating), (c) use of the Product or Accessory to abnormal usage or conditions; or (d) other acts which are not the fault of Giant International Ltd., are excluded from coverage.

**Use of non-Olympia branded products and accessories:** Defects or damage that result from the use of non-Olympia branded or certified products, accessories, software or other peripheral equipment are excluded from coverage.

**Unauthorized service or modification:** Defects or damages resulting from service, testing, adjustment, installation, maintenance, alteration, or modification in any way by someone other than Giant International Ltd. or its authorized distributors, are excluded from coverage.

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**Altered products:** Products or accessories with (a) serial numbers or date tags that have been removed, altered or obliterated; (b) broken seals that show evidence of tampering; (c) mismatched board serial numbers; or (d) nonconforming or non-Olympia branded housings, or parts, are excluded from coverage.

**Communication services:** Defects, damages, or the failure of Products or Accessories due to any communication service or signal you may subscribe to or use with the Products or Accessories is excluded from coverage.

### **What other limitations are there?**

Any implied warranties, including without limitation the implied warranties of merchantability and fitness for a particular purpose, shall be limited to the duration of this limited warranty, otherwise the repair, replacement, or refund as provided under this express limited warranty is the exclusive remedy of the customer, and is provided in lieu of all other warranties, express or implied. In no event shall Giant International Ltd. be liable, whether in contract

## **Warranty**

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or tort (including negligence) for damages in excess of the purchase price of the product or consequential damages of any kind, or loss of revenue or profits, loss of business, loss of information or other financial loss arising out of or in connection with the ability or inability to use the products or accessories to the full extent these damages may be disclaimed by law.

Some states and jurisdictions do not allow the limitation or exclusion of incidental or consequential damages, or limitation on the length of an implied warranty, so the above limitation or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state or from one jurisdiction to another.

### **How to obtain warranty service or other information?**

Contact your dealer or distributor and they will contact Giant International Ltd. For other questions, contact Giant International Ltd. at 1-866-537-0384 or [giantintl@callcenter.com](mailto:giantintl@callcenter.com).

All warranty returns should be sent to the place of purchase.

**Giant International Ltd.**

3495 Piedmont Rd. NE

Bldg. Ten, Ste. 920

Atlanta GA 30305

USA

E-mail: [giantintl@callcenter.com](mailto:giantintl@callcenter.com)

[www.giantintl.com](http://www.giantintl.com)

Telephone +1 (866) 537-0384

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