

USER'S MANUAL
BEDIENUNGSANLEITUNG
MANUEL D'UTILISATION
MANUAL DE USUARIO
INSTRUKCJA OBSŁUGI
MANUALE D'USO



Includes Wireless microphone system
Adam Hall GmbH.

Model: LDU300/
LDU500



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ENGLISH

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YOU'VE MADE THE RIGHT CHOICE!

We have designed this product to operate reliably over many years. LD Systems stands for this with its name and many years of experience as a manufacturer of high-quality audio products. Please read this User's Manual carefully, so that you can begin making optimum use of your LD Systems product quickly.

You can find more information about **LD-SYSTEMS** at our Internet site **WWW.LD-SYSTEMS.COM**

PREVENTIVE MEASURES

1. Please read these instructions carefully.
2. Keep all information and instructions in a safe place.
3. Follow the instructions.
4. Observe all safety warnings. Never remove safety warnings or other information from the equipment.
5. Use the equipment only in the intended manner and for the intended purpose.
6. Use only sufficiently stable and compatible stands and/or mounts (for fixed installations). Make certain that wall mounts are properly installed and secured. Make certain that the equipment is installed securely and cannot fall down.
7. During installation, observe the applicable safety regulations for your country.
8. Never install and operate the equipment near radiators, heat registers, ovens or other sources of heat. Make certain that the equipment is always installed so that it is cooled sufficiently and cannot overheat.
9. Never place sources of ignition, e.g., burning candles, on the equipment.
10. Ventilation slits must not be blocked.
11. Keep a minimum distance of 20 cm around and above the device.
12. Do not use this equipment in the immediate vicinity of water (does not apply to special outdoor equipment - in this case, observe the special instructions noted below. Do not expose this equipment to flammable materials, fluids or gases. Avoid direct sunlight!
13. Make certain that dripping or splashed water cannot enter the equipment. Do not place containers filled with liquids, such as vases or drinking vessels, on the equipment.
14. Make certain that objects cannot fall into the device.
15. Use this equipment only with the accessories recommended and intended by the manufacturer.
16. Do not open or modify this equipment.
17. After connecting the equipment, check all cables in order to prevent damage or accidents, e.g., due to tripping hazards.
18. During transport, make certain that the equipment cannot fall down and possibly cause property damage and personal injuries.
19. If your equipment is no longer functioning properly, if fluids or objects have gotten inside the equipment or if it has been damaged in any way, switch it off immediately and unplug it from the mains outlet (if it is a powered device). This equipment may only be repaired by authorized, qualified personnel.
20. Clean the equipment using a dry cloth.
21. Comply with all applicable disposal laws in your country. During disposal of packaging, please separate plastic and paper/cardboard.
22. Plastic bags must be kept out of reach of children.
23. Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FOR EQUIPMENT THAT CONNECTS TO THE POWER MAINS

24. **CAUTION:** If the power cord of the device is equipped with an earthing contact, then it must be connected to an outlet with a protective ground. Never deactivate the protective ground of a power cord.
25. If the equipment has been exposed to strong fluctuations in temperature (for example, after transport), do not switch it on immediately. Moisture and condensation could damage the equipment. Do not switch on the equipment until it has reached room temperature.
26. Before connecting the equipment to the power outlet, first verify that the mains voltage and frequency match the values specified on the equipment. If the equipment has a voltage selection switch, connect the equipment to the power outlet only if the equipment values and the mains power values match. If the included power cord or power adapter does not fit in your wall outlet, contact your electrician.
27. Do not step on the power cord. Make certain that the power cable does not become kinked, especially at the mains outlet and/or power adapter and the equipment connector.
28. When connecting the equipment, make certain that the power cord or power adapter is always freely accessible. Always disconnect the equipment from the power supply if the equipment is not in use or if you want to clean the equipment. Always unplug the power cord and power adapter from the power outlet at the plug or adapter and not by pulling on the cord. Never touch the power cord and power adapter with wet hands.
29. Whenever possible, avoid switching the equipment on and off in quick succession because otherwise this can shorten the useful life of the equipment.
30. **IMPORTANT INFORMATION:** Replace fuses only with fuses of the same type and rating. If a fuse blows repeatedly, please contact an authorized service centre.
31. To disconnect the equipment from the power mains completely, unplug the power cord or power adapter from the power outlet.
32. If your device is equipped with a Volex power connector, the mating Volex equipment connector must be unlocked before it can be removed. However, this also means that the equipment can slide and fall down if the power cable is pulled, which can lead to personal injuries and/or other damage. For this reason, always be careful when laying cables.
33. Unplug the power cord and power adapter from the power outlet if there is a risk of a lightning strike or before extended periods of disuse.

**CAUTION:**

To reduce the risk of electric shock, do not remove cover (or back). There are no user serviceable parts inside. Maintenance and repairs should be exclusively carried out by qualified service personnel.



The warning triangle with lightning symbol indicates dangerous uninsulated voltage inside the unit, which may cause an electrical shock.



The warning triangle with exclamation mark indicates important operating and maintenance instructions.



Warning! This symbol indicates a hot surface. Certain parts of the housing can become hot during operation. After use, wait for a cool-down period of at least 10 minutes before handling or transporting the device.



Warning! This device is designed for use below 2000 metres in altitude.



Warning! This product is not intended for use in tropical climates.

CAUTION! HIGH VOLUMES IN AUDIO PRODUCTS!

This device is meant for professional use. Therefore, commercial use of this equipment is subject to the respectively applicable national accident prevention rules and regulations. As a manufacturer, Adam Hall is obligated to notify you formally about the existence of potential health risks.

Hearing damage due to high volume and prolonged exposure: When in use, this product is capable of producing high sound-pressure levels (SPL) that can lead to irreversible hearing damage in performers, employees, and audience members. For this reason, avoid prolonged exposure to volumes in excess of 90 dB.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INTRODUCTION

Developed in Germany, the UHF Diversity wireless systems from the U300® series deliver excellent audio performance. They achieve a range of 100 metres in ideal conditions and are available in three frequency bands: 470-542MHz. Up to six U300® systems can be used simultaneously for each frequency band. Convenient one-touch synchronisation of transmitter and receiver via infra-red facilitates fast, trouble-free wireless connection and the squelch function with pilot tone ensures fail-safe operation.

- Available with hand or pocket transmitter
- Infra-red frequency synchronisation
- Fail-safe operation provided by pilot tone
- 12 channels
- Up to 6 systems can be used simultaneously
- Belt-pack transmitter with gain control and status LED
- Dynamic hand-held microphone with status LED
- U500® microphone heads also suitable for U300® hand-held transmitter
- Long battery life

- Available in the following frequencies: 470-542MHz (LDU 504.7/LDU 505.1/LDU 305.1/LDU 304.7)

Please note: The use of the wireless microphone system may require a license, depending on the country of use. For detailed information please contact the relevant authority in your country.

Pilot tone

The pilot tone function protects a wireless microphone system against interference, for example, unwanted signals from other radio transmission systems. The transmitter adds a second, inaudible signal (the pilot tone) to the actual signal which is to be transmitted. The receiver identifies it as the matching pilot tone and frees the associated signal. Signals without a matching pilot tone remain muted.

Included

LDU30xHHD: Receiver plus hand-held transmitter with dynamic capsule (cardioid), power supply, 2 x AA batteries, audio cable, manual

LDU30xBPH: Receiver plus pocket transmitter and headset (black), power supply, 2 x AA batteries, audio cable, manual

LDU50xHHD: Receiver plus pocket transmitter and guitar cable, power supply, 2 x AA batteries, audio cable, manual

LDU50xBPH: Receiver plus pocket transmitter and Lavalier microphone, power supply, 2 x AA batteries, audio cable, manual

CONNECTIONS, OPERATING AND DISPLAY ELEMENTS

RECEIVER



1 POWER

On/off switch. Press and hold the button for approximately 1 seconds to turn the device on or off.

2 CHANNEL DISPLAY

Illuminated LC display to show the radio channel.

3 CHANNEL + / -

Push buttons to select the radio channel 01 to 12. To establish a wireless connection between the transmitter and the receiver, the radio frequency on both machines must match (synchronisation process as described under point 6. ASC).

4 VOL

Rotary knob to adjust the output volume.

5 IR INTERFACE

Infra-red interface for synchronising the receiver's radio channel with the transmitter.

6 ASC

To synchronise the transmitter with the radio channel set in the receiver, position the infra-red port of the transmitter directly in line with the infra-red interface of the receiver and switch on the transmitter and receiver (distance about 10 cm, IR interface of the hand transmitter is below the status LED, IR interface of the pocket transmitter on the front side). Now press the ASC button to start the synchronisation process. A red LED indicator will light up in the window of the IR interface during the process. After a few seconds, the process is completed and one of the LED indicators ANTENNA A and B will light up (= wireless connection exists).

7 LEVEL INDICATOR

5-segment LED chain to display the audio signal level.

8 ANTENNA A - B

Indicator LEDs for the antenna systems A and B. The antenna system with the stronger radio signal is activated and the corresponding indicator LED lights up.

9 RECEPTION ANTENNAS A - B

For optimum reception, please position the antennas in an upward-facing V-position.



10 DC SOCKET

Low-voltage socket for the power supply to the device. Please use only the supplied mains adapter.

11 CABLE STRAIN-RELIEF

Cable strain relief for power adapter cable.

12 UNBALANCED OUTPUT

Unbalanced audio output via 6.3mm jack socket.

13 INSTRUMENT/LINE (UNBALANCED OUTPUT)

Switch for level and impedance-matching to instruments or line inputs of an amplifier or mixer. Using a suitable tool (e.g. a ballpoint pen), push the switch into the depressed INSTRUMENT position for connection to the input of an instrument amplifier (guitar or bass amp) and for connection to the line-input of a mixer or amplifier, select the non-depressed position LINE.

14 BALANCED OUTPUT

Balanced audio output via 3-pin XLR jack.

HAND-HELD TRANSMITTER



15 MICROPHONE HEAD

The microphone head is interchangeable, the hand-held transmitter is compatible with the microphone heads from the LD U500® series, available separately.

16 ON / OFF

On/off switch. Move the switch to the ON position to turn on the hand-held transmitter, and to the OFF position to turn it off.

17 STATUS LED

If the charge status of the batteries is sufficient, the LED lights up green when the hand transmitter is switched on. If the LED lights up red, the charge status is weak. In this case, replace the batteries (2 x AA/LR6 type, alkaline). During the synchronisation process, the LED flashes green and amber.

18 IR INTERFACE

Infra-red interface for synchronising the radio channel from receiver and transmitter.

19 BATTERY COMPARTMENT COVER

To replace the batteries, open the hand transmitter battery compartment by rotating it anti-clockwise and pulling it from the housing. Remove the used batteries and replace with new batteries (AA), following the diagram in the battery compartment. Replace the battery compartment cover and rotate it clockwise to close the battery compartment. If the transmitter is not used for a long period, remove the batteries to avoid damage to the transmitter from leaking batteries.

20 BATTERY COMPARTMENT

For 2x AA, Mignon



21 Antenna Pocket transmitter antenna. For optimum reception, do not cover or kink.

22 IR INTERFACE

Infra-red interface for synchronising the radio channel from receiver and transmitter.

23 INPUT

3-pin mini XLR socket to connect a headset, Lavalier or instrument microphone and guitar cable.

24 ON / STANDBY / OFF

Switch to activate or deactivate the pocket transmitter (ON = transmitter is switched on, OFF = transmitter is switched off). In the STANDBY position, the transmitter is in operation but the audio signal is muted.

25 STATUS LED

If the charge status of the batteries is sufficient, the LED lights up green when the pocket transmitter is switched on. If the LED lights up red, the charge status is weak. In this case, replace the batteries (2x AA/LR6 type, alkaline). During the synchronisation process, the LED flashes green and amber.

26 MIC / 0dB / -10dB

For setting the input sensitivity. Adjust the sensitivity so that an active signal (speech, vocals, guitar...) causes the amber-coloured level-LED on the receiver to light up. If the red PEAK LED lights up or flashes, reduce the sensitivity on the 3-position switch MIC/0dB/-10dB to the next lower value to prevent otherwise unwanted distortion. (Examples: Headset = MIC, guitar with passive pickups = 0dB, guitar with active pickups = -10dB).

BATTERY COMPARTMENT

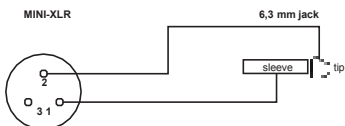
To replace the batteries, open the battery compartment of the pocket transmitter by simultaneously pressing both markers on the sides of the battery cover and opening it forwards. Remove the used batteries and replace with new batteries (AA/LR6, alkaline), following the diagram in the battery compartment. Replace the battery compartment cover on the housing and click it into place. If the transmitter is not used for a long period, remove the batteries to avoid damage to the transmitter from leaking batteries.

ATTACHING THE POCKET TRANSMITTER

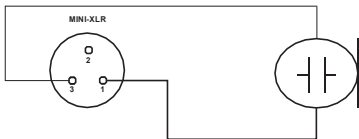
Attach the transmitter to a belt or strap as shown.



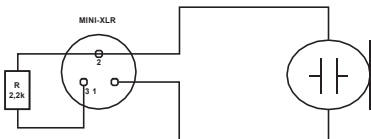
PIN ALLOCATION FOR MINI XLR CONNECTOR (POCKET TRANSMITTER)



Guitar, bass and other high-impedance signal sources.



Condenser microphone with internal pull-up resistor.



Condenser microphone without internal pull-up resistor.

TROUBLESHOOTING

PROBLEM	SYMPTOM	SOLUTION
No audio signal or level too low	Receiver: No reception displayed on either antenna A or B.	Check if the transmitter is turned on. Check the batteries in the transmitter.
	Receiver: Display lighting is switched off	Check the power supply for the receiver and whether the receiver is switched on.
	Receiver: No reception displayed on either antenna A or B. Transmitter: Device is switched on. Charge status of the batteries is ok.	Check whether radio frequency of the transmitter and the receiver are matching. Reduce the distance between transmitter and receiver. Ensure that there is a direct line of sight between the transmitter and the receiver. Ensure that the antennas on the receiver are positioned in an upward V-shape.
	Receiver: Reception on antenna A or B is displayed.	Increase the signal level or increase the input sensitivity on the pocket transmitter.
Distortion and interference	Receiver: Radio signal is displayed	Remove possible sources of interference (digital devices, other radio systems).
Distorted sound	Transmitter: Status LED is lit up red.	Replace the batteries in the transmitter.
	Receiver: Peak LED on the receiver is lit.	Reduce the signal level or reduce the input sensitivity on the pocket transmitter.

OPTIONAL ACCESSORIES

LDU 504.7 – microphone head with condenser capsule and hypercardioid pickup pattern (for hand-held transmitters, matt black)

LDU 505.1 – microphone head with dynamic capsule and hypercardioid pickup pattern (for hand-held transmitters, matt black)

LDU 305.1 – microphone head with condenser capsule and cardioid pickup pattern (for hand-held transmitters, matt silver)

LDU 304.7 – microphone head with dynamic capsule and cardioid pickup pattern (for hand-held transmitters, matt silver)

LDWS100MH3 – beige-coloured headset with condenser microphone (for pocket transmitters)

LDWS100MH1 – black headset with condenser microphone (for pocket transmitters)

LDWS1000MW – clip microphone for wind instruments (for pocket transmitters)

LDWS100ML – Lavalier microphone (for pocket transmitters)

LDWS100GC – guitar cable (for pocket transmitters)

LDU300RK – 19" rack mounting kit for the installation of a single receiver (2 rack-mount brackets, 2 caps and 1 set of screws included).



LDU500RK2–19" rack mounting kit for the installation of two single receivers (2 rack-mount brackets, 2 connectors and 1 set of screws included).



Installation

- 1. Attach connectors (receiver A on the right-hand side, receiver B on the left-hand side).
- 2. Screw both receivers together.
- 3. Attach brackets (receiver A on the left-hand side, receiver B on the right-hand side).



TECHNICAL DATA

RECEIVER			
Item number:	LDU 500	LDU 300	L
Receiver type:	UHF diversity	UHF diversity	
Modulation:	FM	FM	
Frequency range:	470-542MHz	470-542MHz	
Channels:	12	24	
Antenna connectors:	2 x fixed antennas	2 x fixed antennas	
Antenna gain:	2.15 dBi	2.15 dBi	
Frequency response:	25–16,000 Hz	25–16,000 Hz	
Noise reduction:	Squelch, fixed level	Squelch, fixed level	
THD (system):	<0.3%	<0.3%	
Signal-to-noise ratio (system):	>104dB	>104dB	
Balanced output:	XLR	XLR	

Unbalanced output:	6.3 mm jack	6.3 mm jack
Audio output level (balanced):	+10dBu	+10dBu
Audio output level (unbalanced):	+7dBV/+2.5dBV (switchable line/instrument)	+7dBV/+2.5dBV (switchable line/instrument)
Controls:	POWER, + / - channel select, ASC, VOL volume control, switch INSTRUMENT/LINE	POWER, + / - channel select, ASC, VOL volume control, switch INSTRUMENT/LINE
Indicators:	2 digit LC display, 5-segment LED level meter, antenna A/B LEDs	2 digit LC display, 5-segment LED level meter, antenna A/B LEDs
Operating voltage:	12V DC, 500 mA	12V DC, 500 mA
Ambient temperature (in operation):	5°C to 40°C	-10°C to 45°C
Relative humidity:	20% to 80% (non-condensing)	20% to 80% (non-condensing)
Dimensions (W x H x D):	211 x 43 x 120 mm	211 x 43 x 120 mm
Weight:	0.7 kg	0.7 kg
Accessories included:	power adapter	power adapter
Features:	infra-red frequency synchronisation, pilot tone	infra-red frequency synchronisation, pilot tone

HAND-HELD TRANSMITTER

Item number:	LDU 305.1 HT / LDU 304.7 HT	LDU 504.7 HT / LDU 505.1 HT
Modulation:	FM	FM
Frequency range:	470-542MHz	470-542MHz
Channels:	12	24
Microphone type:	Dynamic	Dynamic
Polar pattern:	Cardioid	Cardioid
Frequency response:	55–16,000 Hz	55–16,000 Hz
RF output power:	10 mW PEP	0.42 mW PEP
Antenna gain:	0.5 dBi	0.5 dBi
Controls:	Power on/off	Power on/off
Indicators:	Status LED	Status LED
Power supply:	2 x AA batteries	2 x AA batteries
Operating time:	up to 10 h (depending on batteries)	up to 10 h (depending on batteries)
Ambient temperature (in operation):	5°C to 40°C	-10°C to 45°C
Relative humidity:	20% to 80% (non-condensing)	20% to 80% (non-condensing)
Dimensions (L x Ø):	257 x 50 mm	257 x 50 mm
Weight (without batteries):	0.235 kg	0.235 kg
Accessories included:	2 x AA batteries	2 x AA batteries
Features:	infra-red frequency synchronisation, pilot tone, microphone head interchangeable	infra-red frequency synchronisation, pilot tone, microphone head interchangeable

BODY PACK TRANSMITTER

Item number:	LDU 305.1 BP / LDU 304.7 BP	LDU 504.7 BP / LDU 505.1 BP
Modulation:	FM	FM
Frequency range:	470-542MHz	470-542MHz
Channels:	12	24
Input:	3-pin mini-XLR (low-Z + phantom power/high-Z)	3-pin mini-XLR (low-Z + phantom power/high-Z)
Frequency response:	25–16,000 Hz	25–16,000 Hz
RF output power:	10 mW PEP	0.42 mW PEP
Antenna gain:	0.5 dBi	0.5 dBi
Controls:	ON/STANDBY/OFF, MIC/0/-10	ON/STANDBY/OFF, MIC/0/-10
Indicators:	Status LED	Status LED
Power supply:	2 x AA batteries	2 x AA batteries
Operating time:	Up to 10 h (depending on batteries)	Up to 10 h (depending on batteries)
Ambient temperature (in operation):	5°C to 40°C	-10°C to 45°C
Relative humidity:	20% to 80% (non-condensing)	20% to 80% (non-condensing)
Dimensions (W x H x D):	65 x 91 x 25 mm	65 x 91 x 25 mm
Weight (without batteries):	0.085 kg	0.085 kg
Accessories included:	2 x AA batteries	2 x AA batteries
Features:	infra-red frequency synchronisation, pilot tone	infra-red frequency synchronisation, pilot tone

MICROPHONES FOR BODY PACK TRANSMITTER

Item number:	LDWS100MH1	LDWS100ML	LDWS1000MW
Microphone type:	Headset	Lavalier microphone	Wind instrument microphone
Capsule:	Back-electret condenser	Back-electret condenser	Back-electret condenser
Polar pattern:	Cardioid	Cardioid	Cardioid
Frequency response:	20–20,000 Hz	20–20,000 Hz	50–18,000 Hz
Connector:	3-pin mini-XLR	3-pin mini-XLR	3-pin mini-XLR
Accessories included:	Foam windscreen	Foam windscreen	Foam windscreen

GUITAR CABLE FOR BODY PACK TRANSMITTER

Item number:	LDWS100GC
Connector 1:	3-pin mini-XLR
Connector 2:	6.3 mm jack
Cable length:	1.5 m

MANUFACTURER'S DECLARATIONS

MANUFACTURER'S WARRANTY & LIMITATIONS OF LIABILITY

You can find our current warranty conditions and limitations of liability at: https://cdn-shop.adamhall.com/media/pdf/MANUFACTURERS-DECLARATIONS_LD_SYSTEMS.pdf. To request warranty service for a product, please contact Adam Hall GmbH, Adam-Hall-Str. 1, 61267 Neu Anspach / Email: Info@adamhall.com / +49 (0)6081 / 9419-0.

CORRECT DISPOSAL OF THIS PRODUCT

(valid in the European Union and other European countries with a differentiated waste collection system)

■ This symbol on the product, or on its documents indicates that the device may not be treated as household waste. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. Please dispose of this product separately from other waste and have it recycled to promote sustainable economic activity. Household users should contact either the retailer where they purchased this product, or their local government office, for details on where and how they can recycle this item in an environmentally friendly manner. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial waste for disposal.

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation

CE Compliance

Enping Pasgao Electronic Company Limited states that this product meets the following guidelines (where applicable): R&TTE (1999/5/EC) or RED (2014/53/EU) from June 2017

Low voltage directive (2014/35/EU)

EMC directive (2014/30/EU)

RoHS (2011/65/EU)

The complete declaration of conformity can be found at www.adamhall.com.

Furthermore, you may also direct your enquiry to info@adamhall.com.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Information

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.