LR-3200 USER MANUAL



Basic DSP RF Receiver (072 MHz)



Dear Valued Customer,

Thank you for choosing Listen! We are dedicated to providing you with the highest quality products available, and take pride in delivering outstanding performance to ensure you are completely satisfied.

We independently certify each of our products to the highest quality standards and back them with a limited lifetime guarantee. We are available to answer any questions you might have during installation or in the operation of our products. At Listen, it's all about you, should you have any comments or suggestions we're here to listen.

Here's how to reach us:

- +1.801.233.8992 +1.800.330.0891 North America
- +1.801.233.8995 fax support@listentech.com www.listentech.com

Thank you and enjoy your listening experience!

Best regards,

Russell Gentner and the Listen Team

- In the few instances where repairs were needed, 99% of all clients indicated that they were happy with repair turn-around-times and 85% of the time, clients were without their product for less than 10 days!
- Overall client satisfaction of working with Listen was rated 4.8 out of 5.
- "Please continue with your excellent attitude toward customer satisfaction. You guys are great!"
- "I've never had such good service from any company. Keep up the good work!"
- "You stand behind your product wonderfully."



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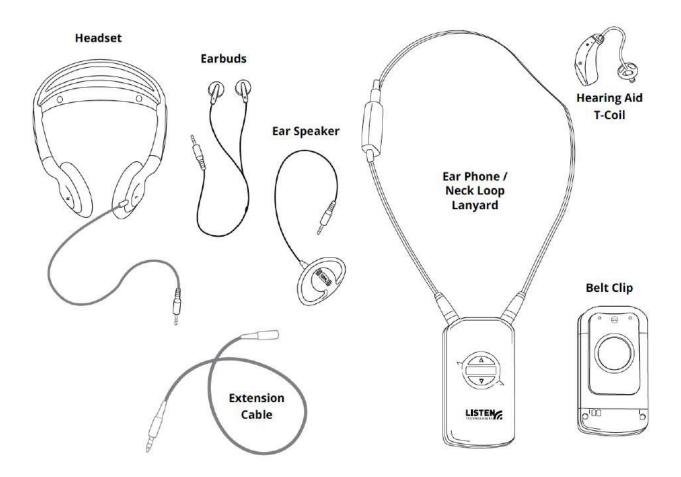
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BASIC DSP™ RECEIVERS

The LR LR-3200 is an Assistive Listening Receiver designed to be compact and simple to use. The unique design of the receiver allows them to be worn as a necklace, using the belt clip or concealed in a pocket, making this the most inconspicuous ALS receiver on the market.



Each receiver can be purchased with a Ear Phone/Neck Loop Lanyard that is designed to hold the receiver like a necklace similar to the Blue Tooth™ transceivers used with many of the today's hearing aids. The Ear Phone/Neck Loop Lanyard can be used as the induction loop for those users who have T-coil enabled hearing aids or cochlear implants, inducing the received audio directly into these T-coil enabled devices. The Ear Phone/Neck Loop Lanyard also provides the connection to Listen's Universal Ear Speaker, Earphones and Headphones, incorporating a short connection cable that plugs directly into the Ear Phone/Neck Loop Lanyards 3.5mm headset jack located 2/3 of the way up the lanyard. A second 3.5mm extension cable provided with Listen's universal earphones provides the length of cable required to place the receiver in a pocket or using the belt clip.



LR-3200 QUICK REFERENCE

- Power On/Off Press and hold for 1 second to turn on. Press and hold for 3 seconds to turn off.
- **Up/Down Volume Control** Press momentarily to adjust the volume up/down or press and hold to ramp the volume. Note: Press and hold both up and down buttons for 5 seconds to activate channel select, use up and down to change the channel. Momentarily press the power button to save and exit.
- Micro USB USB charging, programming, firmware updates and inventory dispensing.
- 3.5 mm Output Jacks Connect Listen Ear Phone/Neck Loop Lanyard for use with T coil hearing aids or with Universal Ear Speaker or Headphone.
- Belt Clip To remove, remove screw and pull belt clip from unit. To install place belt clip in place and insert screw.
- **Charging Contact** For use with Listen charging tray options.
- Indicates unit is on, low battery condition, and charging status.
- **Battery Protective Pull Tab** Remove clear plastic pull tab to activate internal battery connections.
- **Battery Door** Can be removed to access battery and product labeling information.

LR-3200 SPECIFICATIONS

Product Specification: LR-3200-072	2				
Audio	System Frequency Response System Signal to Noise Ratio System Distortion Output/s	50 Hz - 15 kHz (±3 dB) / 50 Hz - 10 kHz (±3 dB) SQ enabled 80 dB, SQ disabled 70 dB / <1% total harmonic distortion (THD) at 80% deviation Two (2) 3.5 mm (0.14 in.) connectors, unbalanced, 0 dBu nominal output level, 50 mW maximum, impedance 32 ohm			
Controls	User Controls Set-up Controls Programming	Power, up/down volume Press and hold up/down volume buttons for 5 seconds to enter channel adjust, use up/down to select channel Via software and USB port			
Indicators	LED	Flashes when batteries are low or to indicate charging, solid when fully charged			
RF	Frequency Range Number of Channels Sensitivity Frequency Accuracy Antenna Type Squelch	72.025 - 75.975 MHz Basic mode 3 wide band, Expanded mode 17 wide band .6uV typical, 1 uV maximum for 12 dB sinad ± .005% stability 32 to 122 °F (0 to 50 °C) Uses ear phone/neck loop lanyard and short ear phone cable or standard earphone cable Programmable in 20 steps, automatic on loss of RF signal			
Power	Battery Type Battery Life Battery Charging Time Power Supply	Lithium Ion 24 Hours of typical use Fully charged in 2.5 Hours Micro USB connector, 5 V, 500 mA			
Physical	Dimensions (H x W x D) Dimensions with Belt Clip Unit Weight Unit Weight with Batteries Shipping Weight Color	3.75 x 2.0 x 0.64 in. (9.6 x 5.0 x 1.7 cm) 3.75 x 2.0 x 0.80 in. (9.6 x 5.0 x 2.1 cm) 1.6 oz (45.4 g) 2.4 oz (68.1 g) 3.2 oz (90.8 g) with 16 oz (454 g) minimum Flat Black			
Environmental	Temperature - Operation Temperature - Storage Relative Humidity	14 to 104 °F (-10 to 40 °C) (-)4 to 122 °F (-20 to 50 °C) 0 to 95% relative humidity, non-condensing			
Compliance	Standards	FCC Part 15 Class B, Industry Canada, ICES-3 (B), RoHS			

LISTENTALK SAFETY CAUTIONS!

Hearing Safety

This product is designed to amplify audio to a high volume level which could potentially cause hearing damage if used improperly. To protect your hearing make sure the volume is turned down before putting on the ear speaker or headphones. Then adjust the volume up to the minimum setting require to hear clearly. Do not allow children or other unauthorized individuals to have access to this product without supervision.

Medical Device Safety

Before using this Listen product with an implantable or other medical device, consult your physician or manufacturer of your implantable or other medical device. Always make sure you are using this product in accordance with the safety guidelines established by your physician or the implantable device manufacturer.

Recycling

Help Listen Technologies protect the environment! Please take the time to dispose of your equipment properly.



Product Recycling Instructions

Please do NOT dispose of your Listen Technologies equipment in the household trash. Please take the equipment to an electronics recycling center; OR, return the product to the factory for proper disposal.



Battery Recycling Instructions

Please do NOT dispose of batteries in the household trash. Please take the batteries to a retail or community collection point for recycling.

QUICK SETUP AND OPERATION INSTRUCTIONS:

1. Unpack Unit

Inspect the unit for physical damage. If damage is apparent, please contact Listen Technologies technical support for assistance.

2. Activate Battery

Remove the clear plastic pull tab located at the bottom of the battery door, this will activate the internal battery connections. Note: upon first activation the battery will have a limited charge, we recommend the unit be charged immediately.

3. Charge Battery

Fully charge the rechargeable Lithium Ion battery by connecting the unit to one of Listen Technologies charging options.

- a. LA-380 Intelligent 12-Unit Charging/Carrying Case
- b. LA-381 Intelligent 12-Unit Charging Tray
- c. LA-421 1-Port USB Charger (comes with cable)
- d. LA-423 4-Port USB Charger (comes with 4 cables)
- e. LA-422 USB to Micro USB cable (Connects receiver to any standard USB port)

When connected to a charging option the status LED next to the power button will begin to flash indicating that the unit is charging. When the unit reaches 100% charged the status LED next to the power button will stop flashing and will be solid.



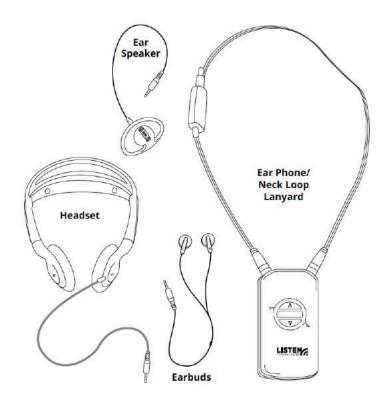
4. Connect Earphone

Using The Earphone/Neck Loop yard:

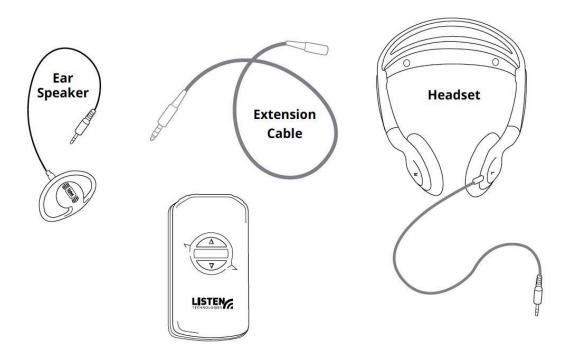
Connect the Listen Intelligent ear phone/ neck loop lanyard to the two 3.5 mm output jacks on the unit. Then connect the short cable ear speaker or headphones to the 3.5mm output jack on the lanyard. The lanyard neck loop is placed over the head and worn as a necklace.

This is the preferred method of wearing the receiver for best performance!

For T-coil compatible hearing aid use simply disconnect the ear speaker or headset from the ear phone/neck loop lanyard.



Using The 3.5mm Earphone Extension Cable: If the receiver is to be clipped to a belt, waistband or inside a pocket a long extension cable is used. Connect the extension cable to the ear speaker, headset or earphones, then connect the extension cable into one of the 3.5 mm output jacks on top of the receiver.



5. Turn the Unit On

Press and hold the Power Button for 1 second to turn the receiver on. The LED will light solid. To turn the receiver off, press and hold the power button for 3 seconds



Power Button: Press and hold for 1 second to turn on, press and hold for 3 seconds to turn off.

6. Channel Select Mode

The Listen receiver is pre-programmed to operate on channel E (72 MHz) from the factory. To receive audio, both the transmitter and receiver(s) need to be set to the same channel. If not, the receiver channel needs to reprogrammed to the channel being broadcast. To adjust the receiver to a different listening channel, press and hold the volume up and down buttons simultaneously for 5 seconds. The front program (red) LED will begin to flash and the current channel will be heard in the ear speaker.

Use the volume up or down button to scroll through the available channels. Once the desired channel is located mometarily press the power button to save and exit the channel select mode or if no button is pressed for 5 seconds then the selected channel will be saved and the unit will exit the channel select mode. See page 14-15 for complete channel selection information.

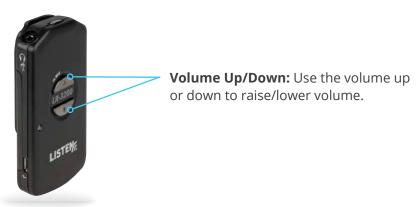


7. Adjust Volume

Adjust the listening volume to a comfortable listening level via the volume up/down buttons.

If the volume is adjusted while there is no audio present the unit will output a momentary tone each time the button is pressed allowing the user to gauge and adjust the audio level to a comfortable listening level.

Note: To protect the users hearing, at power up the receiver will automatically reset to an adjustable default volume level. Put on a headset and then adjust the volume to a comfortable listening level.



BATTERY & BELT CLIP

Low Battery Indication

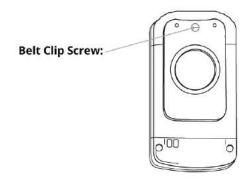
When the unit detects a low battery condition it will cause the status LED to flash slowly indicating that the unit needs to be charged. When the light begins to flash the unit has approximately 3 hours of receiver use before the unit will turn off.



Status LED: Begins to flash when receiver has less than an estimated 3 hours use left on the charge.

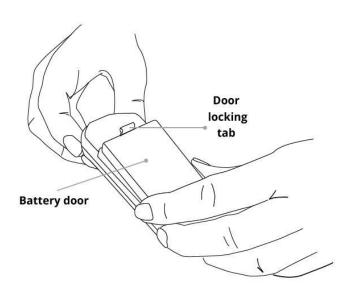
Belt Clip Installation/Removal

To remove belt clip, remove screw and pull belt clip from unit. To install place belt clip in place and insert screw.



Accessing Battery Compartment

To access the battery compartment simply remove the belt clip and battery door by pulling down and out on the battery door locking tab. Note: The product labeling information can be found behind the battery and includes the product model number, description, serial number, contact information and compliance statement.



ADVANCED PROGRAM FEATURES AND LISTEN'S IDSP SOFTWARE SUITE

To manage the advanced program features on any of the iDSP™ receivers a windows based User Interface (UI) software is required.

This software is available free of charge from Listen Technologies. To download the software log onto http://www.listentech.com/support/software/idsp-software-suite/ and follow the instructions.

With the UI software, direct communication is provided via the Micro USB connection on the receiver. Once connected the UI software provides setup and adjustment of the following functions of the LR-3200 receiver.

Note: A help file for the UI software is included with the download and will provide detailed instructions for set up and management of all the advanced program features of the LR-3200 receiver.

Super Quiet Mode

To reduce background noise and increase the audio quality, Listen offers a noise reduction technology called Listen SQ™. Only Listen *transmitters and receivers have SQ™ available, both the transmitter and receiver must have SQ™ activated to achieve the improved sound quality performance. This LR-3200 receiver has been shipped to you with the SQ™ feature disabled.

SQ™ Summary:

Improves noise performance by at least 20 dB

SQ must be enabled for both the transmitter and receivers

SQ™ is NOT Squelch

SQ™ is NOT compatible with other manufactures' products

SQ™ can be disabled to permit operation with early Listen products or other manufactures, products

Note: The LT-803 does not have the SQ^{TM} feature. The LT-800 has the SQ^{TM} feature.

Basic Channels and Expanded Channels Modes

Your Listen receiver has been shipped with the Basic Channel Mode enabled.

In the default Basic Channel Mode, only A, E and H channels are available for selection. If the channel desired is not available in Basic Channel Mode, the receiver will need to be set to the Expanded Channel Mode. In Expanded Channel Mode all 17 wide band and channels are available for selection.

Auto Power Mode

The auto power mode will automatically power the receiver on when the unit is removed from the charging device. When the unit is returned to the charging device the unit will automatically turn off and resume charging operation. Your Listen receiver has been shipped to you with the Auto Power Mode enabled.

Unit ID

The unit ID number provides a unique identification for each receiver. This allows the software to keep track of a specific unit. This can be any 3 digit number between 000 and 999. The unit ID allows venues to track individual units and for easy dispensing and inventory control. Your Listen receiver has been shipped to you with a Unit ID of 000.

Default Volume

Each time the LR-3200 is powered on the headset volume level is set to 35% which is the default level. To change the default volume level setting adjust the software slider to the desired level. The slider can be adjusted in 5% increments from 5% to 100%.

Unit Information

When a unit is connected to the configuration software the software extracts specific information from the unit and displays it for the user. This information includes the model number, frequency, Serial Number, battery level, and Firmware Version.

Reset to Factory Defaults

The unit can be returned to its factory default settings at any time by using the iDSP Software Suite.

Firmware Update

The firmware update function will check via the internet to see if a firmware update is available for the receiver.

RF RECEPTION MAXIMIZATION STRATEGIES:

For proper and reliable operation, Listen receivers should receive a strong and consistent signal from the originating transmitter. Follow these strategies should be used to maximize this signal:

- a. When designing and installing a system, keep in mind that the location of both the transmitter and receivers is critical to maximizing signal strength
- b. Eliminate or minimize obstructions between the transmitter and receivers
- c. Minimize the distance between the transmitter and receivers
- d. Move transmitter and receivers away from metal objects
- e. Place the transmitting antenna as high as possible (on stationary transmitters)
- f. Orient both transmitting and receiving antennas vertically
- g. On portable transmitters and receivers, the cable from the microphone or headset is the antenna; ensure that the cable is not coiled or laying horizontal

CAUTION: When installing remote antennas, ensure the antenna is clear of power lines. Coaxial cable, connectors, and optional antenna mounting kits are available from Listen. Visit www.listentech.com or ask your dealer for details.

72 MHZ COMPATIBILITY CHART:

Frequency MHz	Listen	Phonic Ear	Comtek	Phonak	Wiliams*	Gentner	Telex	Drake
72.0250	1	1	1	A1	(11,1)			
72.0500					(2)	1		
72.0750	2	2	2	A2	(12,3)			
72.1000	Α	Α	А	Α	A, (13,4)	2	Α	72.1
72.1250	3	3	3	A3	(14,5)			
72.1500				(6)	3			
72.1750	4	4	4	A4	(15,7)			
72.2000	K	K	K	K	K, (8)	4	В	72.2
72.2250	5	5	5	K5	(16,9)			
72.2500					(10)	5		
72.2750	6	6	6	K6	(17,11)			
72.3000	В	В	В	В	B,(18,12)	6	С	72.3
72.3250	7	7	7	B7	(19,13)			
72.3500					(14)	7		
72.3750	8	8	8	B8	(20,15)			
72.4000	N	N	N	N	N, (16)	8	D	72.4
72.4250	9	9	9	N9	(21,17)			
72.4750					(18)	9		
72.5000	С	С	С	С	C, (23, 20)	10	Е	72.5
72.5250	11	11	11	C1	(24,21)			
72.5500					(22)	11		
72.5750	12	12	12	C2	(25, 33)			
72.6000	0	0	0	0	O, (24)	12	F	72.6
72.6250	13	13	13	02	(26, 25)			
72.6500					(26)	13		
72.6750	14	14	14	4	(27)			
72.7000	D	D	D	D	D, (28)	14	G	72.7
72.7250	15	15	15	D5	(29)			
72.7500					(30)	15		
72.7750	16	16	16	D6	(30,31)			
72.8000		Р	PP	Р	P, (32)	16	Н	72.8
72.8250	17	17	17	07	(31,33)			
72.8500					(34)	17		
72.8750	18	18		18	P8	(32,35)		
72.9000	E	E	Е	E	E, (33, 36)	18	I	72.9
72.9250	19	19	19	E9	(34,37)			
72.9500					(38)	19		

Basic Mode: 3 channels (A, E, H). Expanded Mode: 17 channels (all lettered).

^{*}Parenthesis indicate T35 and T20 narrowband.

72 MHZ COMPATIBILITY CHART:

Frequency MHz	Listen	Phonic Ear	Comtek	Phonak	Wiliams*	Gentner	Telex	Drake
74.6250	33	33	1	33	e3	(36,40)		
74.6500					(41)	20		
74.6750	34	34	34	e4	(37, 42)			
74.7000	I	I	1	1	I, (38, 43)	21	0	
74.7250	35	35	35	15	(39, 44)			
74.7500					(45)	22		
74.7750	36	36	36	16	(40, 46)			
75.2250	37	37	37	17	(41, 47)			
75.2500					(48)	23		
75.2750	38	38	38	18	(42, 49)			
75.3000	J	J	J	J	J, (43, 50)	24	Р	
75.3250	39	39	39	J9	(55, 51)			
75.3500					(52)	25		
75.3750	40	40	40	J0	(45, 53)			
75.4000	R	R	R	R	R, (54)	26	Q	
75.4250	21	21	21	R1	(46, 55)			
72.4250	9	9	9	N9	(21,17)			
75.4500					(56)	27		
75.4750	22	22	22	R2	(47, 57)			
75.5000	F	F	F	F	F, (48, 58)	28	J	75.5
75.5250	23	23	23	F3	(49, 59)			
75.5500					(60) 29			
75.5750	24	24	24	F4	(50, 61)			
75.6000	S	S	S	S	S, (62)	30	K	75.6
75.6250	25	25	25	S5	(51, 63)			
75.6500					(64)	31		
75.6750	26	26	26	S6	(52, 65)			
75.7000	G	G	G	G	G, (53, 66)	32	L	75.7
75.7250	27	27	27	G7	(54, 67)			
75.7500					(68)	33		
75.7750	28	28	28	G8	(55, 69)			
75.8000	Т	Т	Т	Т	T, (70)	34	M	75.8
75.8250	29	29	29	Т9	(56, 71)			
75.8500					(72)	35		
75.8750	30	30	30	ТО	(57, 73)			
75.9000	Н	Н	Н	Н	H, (58, 74)	36	N	75.9
75.9250	31	31	31	H1	(59, 75)			
75.9500					(76)	37		
75.9750	32	32	32	H2	(60, 77)			

TROUBLESHOOTING LR-3200 RECEIVERS:

The receiver has no power

Make sure the unit has either a fully charged battery or a Listen approved wall charging transformer is connected. Make sure the Power button on the top of the unit has been pressed to turn the unit ON. If this does not work, make sure the battery is installed properly and / or install a replacement battery.

There is no audio

Make sure the volume control is turned up to at least 25%. Check the Intelligent Earphone/Neck Loop Lanyard to insure it's plugged all of the way. Make sure the Ear Phone is plugged into the Earphone/Neck Loop Lanyard. Check to insure the transmitter is broadcasting an audio source. Verify the receiver is tuned to the same channel as the transmitter. If the RF signal is too weak, the receiver will squelch and mute the audio source; move closer to the antenna or make sure the transmitter's output RF power switch is set on "FULL" (LT-800).

The audio is distorted

Check the receiver is on the correct channel and make sure your using the clearest channel possible. Verify the audio on the transmitter is not turned up too loud; this will cause distortion. Insure the Intelligent Ear Phone/Neck Loop Lanyard connectors are pushed all the way into the jacks on top of the unit. Check the Ear Phone to verify it is plugged all the way into the Ear Phone/Neck Loop Lanyard. Review the SQ™ settings on your transmitter and receivers to verify both are turned ON (or OFF, if some of your equipment is not SQ™ capable). Make sure the receiver is not too close to the transmitting antenna. If the receiver can't get farther away from the antenna, turn down the RF output power on the stationary (LT-800) transmitter.

I cannot pick up the signal on the receiver

Check to make sure the receiver and the transmitter are on the same exact channel frequency. Verify the receiver is in broadcast range of the transmitter. Move the receiver closer to the transmitter.

I can pick up the signal on the receiver, but it sounds like it's not tuned in

Check the transmitter and receiver and verify they are both on exactly the same channel number/letter. Make sure you are using a clear channel that is free from noise and interference.

I'm using another brand of transmitter - how do I tell which channel to use?

Refer to Listen's Frequency Compatibility Table (page 16). Adjust either the transmitter or the receiver to a common channel.

There is not sufficient range

Inspect the transmitting antenna verify it is located as close as possible to the receiving area. Place the antenna as high as possible and check to see it is free from obstacles. Check the squelch setting on the unit; perhaps it is too sensitive.

When I change channels, only certain channels are accessible

The unit has been programmed to basic mode which only shows the A, E, and H channels. The unit can be programmed for expanded mode which will show all 17 channels. This is programmed via the configuration software.

My battery is not charging

Verify the clear plastic pull tab has been removed from the receiver battery door engaging the battery connections. Make sure the battery is installed properly and that the unit is plugged into the charging device correctly. Check the charging device to verify it is plugged in the proper power outlet and power is available at the outlet. If this does not work, install a replacement battery.

I want to run the unit from a wall transformer

Simply plug a Listen approved charging transformer (LA-421) into the Micro USB connector on the side of the unit. A battery must be installed at all times even when operating the unit with a wall charging transformer.

COMPLIANCE NOTICE AND FCC STATEMENT AND INDUSTRY **CANADA STATEMENTS**

Compliance Notice

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

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.

This equipment has been certified to comply with the limits for a class B computing device, pursuant to FCC and IC Rules. In order to maintain compliance with FCC and IC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

Industry Canada Statement

This equipment complies with ICES-003 class B.

CAN ICES-3 (B)/NMB-3(B)

WARRANTY

Listen Technologies warrants ListenRF receivers to be free from defects in materials and workmanship under normal use and conditions for (5) five-years from the original date of purchase. All product warranties can be transferred, warranties are valid for (5) years from the original date of purchase.

All rechargeable Li-ion batteries supplied with transceivers and receivers are warranted for (1) one-year from the date of purchase.

This limited warranty, prices and the specifications of products are subject to change without notice.

https://www.listentech.com/support/warranty/

