

**Configuration:**

- LT-84-01  
ListenIR  
Transmitter/Radiator  
Combo  
(North  
America)
- LT-84-02  
ListenIR  
Transmitter/Radiator  
Combo  
(Asia, UK)
- LT-84-03  
ListenIR Transmitter/Radiator  
Combo  
(Euro)
- LT-84-04  
ListenIR Transmitter/Radiator  
Combo  
(Australia)

**Product Overview:**

The new LT-84 ListenIR 2-Channel Transmitter-Radiator is the only product of its kind that provides complete coverage in a wide variety of venue spaces. This advanced IR product is simple to use, cost-effective, designed to blend in to any environment, and offers twice the amount of IR power of similar products, and up to six times the coverage area.

A single unit provides up to 30,000 ft<sup>2</sup> (2787 m<sup>2</sup>) coverage area with LR-4200-IR/LR-5200-IR receivers or 7,500 ft<sup>2</sup> (697 m<sup>2</sup>) with LR-42/LR-44 receivers in single channel mode, ensuring that the entire room has coverage without gaps or null spots.

The LT-84 is the first IR system with Expansion Radiators (LA-141) that implement delay compensation—no signal cancellation drop outs.

It is the only two channel Transmitter-Radiator with up to four frequencies; 2.3 MHz, 2.8 MHz, 3.3 MHz, or 3.8 MHz, providing flexibility in the field and eliminating the need to purchase a specific frequency based transmitter-radiator.

In addition four (4) Expansion Radiators (LA-141) can be added for additional coverage, when mounted within 100 ft. (30.48 m) cable length from the LT-84.

A single CAT-5e cable carries both power and signal to the LA-141 Expansion Radiators making it a true one-cable connection.

Easy installation includes mounting hardware for wall, ceiling, or table mounting and a multi-lingual legislative compliance sign. Flexible frequency selection and input connectivity minimizes on-site installation hassles.

**Highlights:**

- The best, most cost-effective solution for secure assistive listening in smaller spaces such as; classrooms, courtrooms, corporate meeting rooms, and theaters.
- The only product of its kind that provides complete, gap-less coverage in small-to-medium spaces.
- This advanced IR product is simple to use, cost-effective, designed to blend in to any environment, and offers more coverage than similar products.
- The LT-84 with one channel covers up to 30,000 ft<sup>2</sup> (2787 m<sup>2</sup>) with LR-4200-IR/LR-5200-IR receivers or 7,500 ft<sup>2</sup> (697 m<sup>2</sup>) with LR-42/LR-44 receivers.
- Add up to (4) four expansion radiators (LA-141) for additional coverage, when mounted within 100 ft. (30.48 m) cable length from the LT-84.
- Flexible frequency selection of 2.3, 2.8, 3.3, 3.8 MHz in a single unit.
- True one-cable connection via single CAT-5e cable which carries both power and signal to the LA-141 expansion radiators.
- Flexible input connectivity of Mic, RCA stereo sum, and Phoenix line level summed on each input channel simplifies installation.

**Includes:**

- One (1) LT-84 ListenIR 2-Channel Transmitter/Radiator Combo
- One (1) LA-210 12 VDC Universal Power Supply/Power Cord
- One (1) LA-344 Flexible Mounting Hardware
- Two (2) Phoenix Type Connectors
- One (1) LA-303 Multi-Lingual Assistive Listening Notification Sign
- One (1) Quick Start Guide

**Architectural Specification:**

The Infrared Transmitter/Radiator Combo shall be capable of broadcasting up to two (2) audio channels with the choice of four (4) mono carrier frequencies; 2.3, 2.8, 3.3 and 3.8 MHz. Channel carrier selections shall be set via a back panel rotary switches. The Transmitter/Radiator coverage area shall be up to 30,000 ft<sup>2</sup> (2787 m<sup>2</sup>) with LR-4200-IR/LR-5200-IR receivers or 7,500 ft<sup>2</sup> (697 m<sup>2</sup>) with LR-42/LR-44 receivers in single channel mode. The device shall have a timer that shuts off the carriers after 15 minutes when no audio is present at the inputs. The Transmitter/Radiator shall have a SNR of 60 dB or better and THD of less than 2%. The device shall have an audio frequency response of 63 Hz to 15 kHz, +/- 3db. The device shall have two (2) independent mixing audio inputs, one for each transmission channel. Each mixing input shall consist of one (1) 3.5 mm Microphone input, one (1) balanced Phoenix type input and one (1) unbalanced RCA stereo summing input. The device shall have independent channel audio processing with Limiting, Compression and Noise Gate as well as transmit level control and level indication via two (2) LEDs. The Transmitter/Radiator shall provide Power and RF signal for up to Four (4) Expansion Radiators over a single CAT-5e cable. The LT-84 is specified.

Product Specification: ListenIR 2-Channel Transmitter/Radiator Combo	
<b>Audio</b>	
Frequency Response	20 Hz - 20 kHz (+/- 1 dB) Line Input 63 Hz - 15 kHz (+/- 3 dB) System Specification (wireless end-to-end with LR-44)
Signal-to-Noise Ratio	>70 dB (SNR) Line Input >60 dB (SNR) System Specification (wireless end-to-end with LR-44)
Total Harmonic Distortion	<0.1% (THD) Line Input <2% (THD) System Specification (wireless end-to-end with LR-44)
Balanced Line Input	Mono Input. Two (2) Phoenix Type connector, balanced, + 4 dBu nominal input, +14 dB headroom, impedance 100k Ohms
Unbalanced Line Input	Stereo/Mono Input. Two (2) Dual (RCA) Phono connectors, unbalanced, -10 dBu nominal input, +14 dB headroom, impedance 10k Ohms
Microphone Input	Two (2) 3.5 mm (0.14 in.) Tip/Sleeve connector, -30 dBu nominal input, +14 dB headroom, impedance 4.4k Ohms, 5 VDC bias supply
<b>Controls</b>	
Power Switch	Three (3) position switch - Power OFF, Power ON-Indicator Lights OFF, Power ON-Indicator Lights ON
Level Control Knob	Two (2) audio taper rotary potentiometer, counter-clockwise decreases input mix level, clockwise increases input mix level
Carrier Frequency Selection	Two (2), four (4) position rotary switches (2.3 MHz, 2.8 MHz, 3.3 MHz, 3.8 MHz)
<b>Indicators</b>	
Power Supply LED	Green LED on in-line power supply indicates AC power is applied
Audio Level Indicators	Two (2) Green LEDs, two (2) Red LEDs, Green LED indicates Audio presence and Red LED indicates peaks in the audio
RJ-45 Amber LED	Solid Amber indicates carrier is present and IR is being transmitted
RJ-45 Green LED	Solid Green indicates power is applied to unit, flashing indicates unit has entered power save mode
<b>RF</b>	
Frequency Accuracy	+/- .005% stability 0 to 50 °C
Transmitter Stability	50 PPM
Number of Channels	Two (2) channels, Selectable carrier frequency
Expansion Link Output	Two (2) RJ-45 connectors - Provides RF Signal and Power, CAT-5e cable 24 AWG, 100 ft. maximum cable length, two (2) LA-141s per output connector
Carrier Frequencies	2.3 MHz, 2.8 MHz, 3.3 MHz, 3.8 MHz, Selectable
Modulation	FM Wideband, ±50kHz deviation max, 50 μS pre-emphasis
Power Save Mode	Carrier will shut off when no audio is present for 15 minutes on both channels to preserve radiator life
<b>IR</b>	
IR Emitter Power	1.49 W

Coverage Area	30,000 ft <sup>2</sup> (2787 m <sup>2</sup> ) single channel with LR-4200-IR/LR-5200-IR receivers or 7,500 ft <sup>2</sup> (697 m <sup>2</sup> ) single channel with LR-42/LR-44 receivers
<b>Power</b>	
Power Supply Output	12 VDC, 4 A, 48 W
Power Supply Connector	2.5 mm ID barrel connector, center positive
Power Output	Two (2) RJ-45 connectors, providing Power and RF signal for up to two (2) LA-141 expansion radiators on each output
Power Supply Type	In-line switching mode power supply, Listen part number LA-210
Power Supply Input	100-240 VAC, 50-60 Hz
Power Supply Line Cord	IEC line cord, North America Type B (LT-84-01), Asia and UK Type G (LT-84-02), Euro Type C (LT-84-03), Australia Type I (LT-84-04)
<b>Physical</b>	
Unit Weight	0.8 lbs. (0.4 kg)
Dimensions (H x W x D)	1.5 x 10.7 x 4.1 in. (3.81 x 27.2 x 10.5 cm)
Color	Black with White Silk Screening
Shipping Weight	3.4 lbs. (1.54 kg)
Unit Weight with Power Supply	1.8 lbs. (0.8 kg)
Mounting	Can be mounted on a wall, ceiling, or table with provided hardware (screws and hollow wall anchors not provided). Optional LA-347 Wall Box Mounting Plate is available for mounting to a standard single gang electrical box.
<b>Environmental</b>	
Temperature - Operation	14 °F (-10 °C) to +104 °F (40 °C)
Relative Humidity	0 to 95% relative humidity, non-condensing
Temperature - Storage	-4 °F (-20 °C) to +122 °F (50 °C)
<b>Compliance</b>	
Power Supply Compliance Marks	CUL, UL, CE, CCC, C-Tick, KC, PSE, GS, FCC, RoHS
Standards	FCC part 15, ICS-03, CE, UL, CUL, C-Tick, CCC, PSE, KC, GS, RoHS, WEEE