

**Configuration:**

LT-84-01 Stationary IR Transmitter/Radiator Combo (North America)

LT-84-02 Stationary IR Transmitter/Radiator Combo (Asia, UK)

LT-84-03 Stationary IR Transmitter/Radiator Combo (Euro)

LT-84-04 Stationary IR Transmitter/Radiator Combo (Australia)

**Product Overview:**

The new LT-84 ListenIR Transmitter-Radiator is 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 twice the amount of IR power of similar products.

A single unit provides more coverage than similar products, up to 7,500 ft<sup>2</sup> (696.77m<sup>2</sup>), ensuring that the entire room has coverage without gaps.

The LT-84 is the first IR system for small-to-medium spaces when combined with Expansion Radiators (LA-141) that implement delay compensation—no signal cancellation drop outs, no matter what the cable length.

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.
- One (1) LT-84 with a LR-42 or LR-44 ListenIR receiver covers 7,500 ft<sup>2</sup> (696.77m<sup>2</sup>) with more than twice the IR power with 1.49 watts of any product of its kind.
- 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.

Listen Technologies Corporation \* 14912 Heritage Crest Way \* Bluffdale \* Utah 84065-4818 U.S.A.

+1.801.233.8992 \* +1.800.330.0891 North America \* +1.801.233.8995 Fax

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Includes:

- One (1) LT-84 ListenIR 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 7,500 ft<sup>2</sup> (697 m<sup>2</sup>) with single channel transmission. 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 an 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 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
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
Unbalanced Line Input	Stereo/Mono Input. Two (2) Dual (RCA) Phono connectors, unbalanced, -10 dBu nominal input, +14 dB headroom, impedance 10k Ohms
<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)

ListenIR Transmitter/Radiator Combo

<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>	
Number of Channels	Two (2) channels, Selectable carrier frequency
Frequency Accuracy	+/- .005% stability 0 to 50 °C
Transmitter Stability	50 PPM
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
Modulation	FM Wideband, ±50kHz deviation max, 50 μS pre-emphasis
Carrier Frequencies	2.3 MHz, 2.8 MHz, 3.3 MHz, 3.8 MHz, Selectable
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>	
Coverage Area	7,500 ft <sup>2</sup> (697 m <sup>2</sup> ) single channel when used with Listen Receivers
IR Emitter Power	1.49 W
<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

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Unit Weight with Power Supply	1.8 lbs. (0.8 kg)
Shipping Weight	3.4 lbs. (1.54 kg)
<b>Environmental</b>	
Temperature - Operation	14 °F (-10 °C) to +104 °F (40 °C)
Temperature - Storage	-4 °F (-20 °C) to +122 °F (50 °C)
Relative Humidity	0 to 95% relative humidity, non-condensing
<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