LT-82
Stationary IR Transmitter

Don't miss a single sound.

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Configuration

LT-82-01 (North America)
LT-82-02 (Asia, UK)
LT-82-03 (Euro)

The Listen LT-82 is the heart of a stationary IR listening system. It takes the desired audio signal and transmits the signal via coaxial cable to one (1) or more IR radiator-emitters (LA-140). The LT-82 can be operated in mono or stereo on one (1) of four (4) different carriers; up to four (4) LT-82 units may be connected to provide up to four (4) mono or stereo carriers to the radiator(s). The LT-82 generates DC power to power up to two (2) LA-140 radiator-emitters. Two (2) LT-82 units can be rack mounted in a single rack space using the LA-326 rack mounting kit. The LT-82 is used for government compliance (such as ADA), assistive listening, language interpretation, live theatre, houses of worship, courtrooms, secure rooms and for auditory description.

Highlights

- Secure wireless communication - ideal for applications where isolation of the signal is important.
- Up to four (4) channels mono, or four (4) channels stereo – no need to sacrifice multiple channels to achieve stereo transmissions (one LT-82 is required for each channel).
- Transmitter can power two (2) radiator/emitters (LA-140) using CAT-5 cabling.
- Easy to specify, install and use.
- Outstanding performance - ensures crystal clear sound for listeners.
- Limited Lifetime Warranty.

Requires

LA-140 Stationary IR Radiator

Used With

LR-42 IR Stethoscope 4-Channel Receiver
LR-44 IR Lanyard 4-Channel Receiver

Architectural Specification

The Stationary IR Transmitter shall be capable of broadcasting on four (4) mono or stereo carriers; 2.3, 2.8, 3.3 and 3.8 MHz. Channel Selection shall be capable of being locked. Multiple transmitters shall be capable of being daisy-chained together to transmit up to four (4) channels simultaneously. The transmitter shall have a timer that shuts off the carriers after 30 minutes when no audio is present at the transmitter. The transmitter shall have a SNR of 60 db or better. The device shall have an audio frequency response of 63 Hz to 15 kHz, +/- 3db. It shall have two (2) mixing audio inputs, one (1) balanced XLR/phone input and one (1) unbalanced RCA input. The device shall have the following audio controls: input level, transmit level, contour level and stereo on/off control. The device shall have an audio processor that is capable of automatic gain control and limiting. The transmitter shall provide power for up to two (2) radiators over CAT-5 cable. The LT-82 is specified.

Includes

LT-82 Stationary IR Transmitter
LA-205 30 VDC Extension/Replacement Power Supply for LA-140/LT-82
LA-89 Interconnection Coaxial Cable
Quick Reference Card

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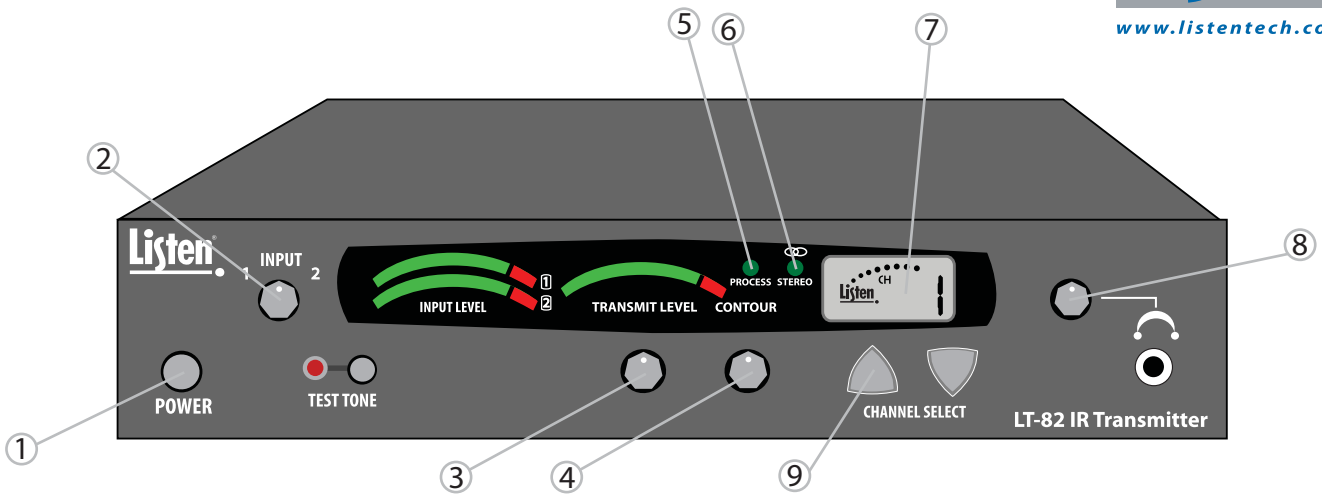

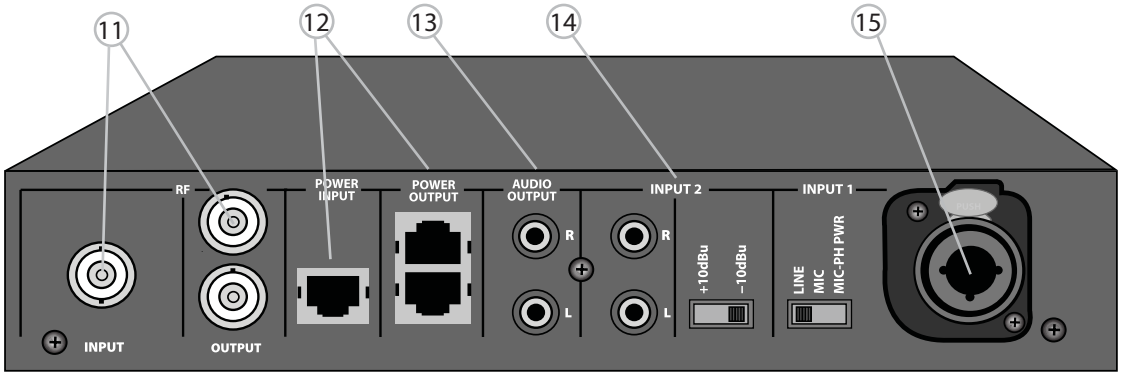

Product Features

1. POWER on/off.
2. Controls input levels of inputs 1 and 2. Dual VU meters indicate input level.
3. Mix level control sets level of the mixed (or transmitted) audio. VU meter shows the output level of your mixed audio.
4. Contour equalization cuts/boosts frequencies above 5 kHz.
5. Processing (automatic gain control) can be turned on and off from the front panel.
6. Stereo indicator. When illuminated, indicates the unit is in stereo mode. Mode can be turned on and off from the front panel.
7. LCD shows channel selected, lock status, programming and carrier on.
8. Headphone jack and volume control to check audio integrity of transmission source.
9. UP/DOWN channel selection of up to four channels or carrier can be turned off.
10. Test tone provides flexibility when setting up and testing your system.
11. "RF Input" provides RF connection from other LT-82 units for multiple carrier interconnections. "RF Output" provides RF connection to LA-140 radiators.
12. In-line Universal Power Supply included [be sure to order the appropriate configuration (power cord) for your country]. Power supply has enough power for the LT-82 and up to two (2) radiators. "Power Input" is from the power supply, "Power Output" is to the radiators.
13. Two (2) phono connectors for a mixed output of Inputs 1 and 2.
14. Two (2) unbalanced phono stereo audio inputs. Select either +10 dBu or -10 dBu input level.
15. Balanced XLR or phone connector audio input. Select either LINE, MIC or MIC-PH PWR (phantom power).

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Accessories

LA-70

Cables / Connectors

LA-70 CAT-5e Cable (Per ft.)
LA-71 RJ-45 CAT-5e Connector (10)
LA-72 RJ-45 CAT-5e Coupler
LA-112 RG-58 50 Ohm Coaxial Cable (Per ft.)
LA-115 RG-58 BNC Coupler
LA-127 RG-58 BNC Connector
LA-326 Universal Rack Mounting Kit
LA-391 RG-58 50 Ohm Preassembled Coaxial Cable (Per ft.)
LA-393 CAT-5e Preassembled Cable (Per ft.)

LA-326

Mounting

LA-326 Universal Rack Mounting Kit

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	Specification	LT-82
RF	Carrier Frequencies	2.3 MHz, 2.8 MHz, 3.3 MHz, 3.8 MHz
	Number of Channels	Four (4) channels. Selectable one (1) channel per transmitter (mono or stereo)
	Carrier Shut Off	Carrier will shut off when no audio is present for 30 minutes to preserve radiator life.
	Frequency Accuracy	+/- .005% stability 0 to 50C
	Transmitter Stability	50 PPM
	RF Output	Two (2) BNC connectors, for connection to radiator(s) and/or additional transmitter(s). 50 mV, 50 ohm, -15 dbm
	RF Input	One (1) BNC connector, for connection from additional transmitter(s). 50 mV, 50 ohm, -15 dbm
	Compliance	FCC Part 15, Industry Canada, CE, RoHS

Audio	** All system specifications are wireless end-to-end	
	System Frequency Response	63 Hz - 15 kHz (+/- 3 dB)
	System Signal to Noise Ratio (A-weighted)	Mono: >60 dB
		Stereo: >52 dB
	System Distortion	<2% total harmonic distortion (THD)
	Audio Input 1	Mono Input (Rear Panel). Female-XLR and 1/4 in. combo connector, balanced, 0/-55 dBu (line/mic) nominal input level adjustable; +21/-30 dBu (line/mic) maximum input level; impedance 20k/1k ohms (line/mic); phantom power +12 VDC
	Audio Input 2	Stereo or Mono Input (Rear Panel). Two (2) Phono connectors, unbalanced, -10/+10 dBu nominal input level adjustable, +30 dBu maximum, impedance 100k ohms
	Audio Processing	Compression can be turned on/off.
	Contour	Cuts and boosts frequencies above 5 kHz
	Combined Audio Output (Mix)	Input 1 and Input 2 Mixed Output (Rear panel). Two (2) Phono connectors, unbalanced, -10 dBu nominal output level, +19 dBu maximum, impedance 10 ohms.
	Monitor Output	Front panel. One (1) 3.5 mm (0.14 in.) connector, unbalanced, adjustable output level, +7 dBu maximum, impedance 10 ohms. 100 mW, 32 ohms

Controls	Front Panel	Power, Test Tone on/off, Channel up/down, Input Level, Transmit Level, Contour, Monitor Level
	Rear Panel	Input 1 Level (Line, Mic, Mic-Phantom Power), Input 2 Level (-10/+10 dBu)
	Internal Adjustments	Compression ratio for audio processor. Slope adjustable from 1:1 to 4:1. Default 2:1
	Programming	Stereo on/off, Processing on/off

Indicators	Unit Power	Red LED illuminates when the unit is powered up (front panel)
	Input 1, Input 2, Transmit Level	Indicates Input 1, Input 2, and Transmit audio levels. 10 segment LEDs (8 green, 2 red)
	Stereo	Indicated by a green LED when on (front panel)
	Processing	Indicated by a green LED when on (front panel)
	RF Carrier	Indicates carrier is active on the LCD Display (front panel)
	LCD	Channel designation, lock status, RF Carrier, programming (front panel)
	Test Tone	Red LED illuminates when test tone enabled (front panel)

Power	Power Supply	In-line switching mode power supply, Listen part number LA-205
		Input: 100-240 VAC, 47-63 hz
		Output: 30 VDC, 1.5 A
		Output Connector: RJ-45
		Compliance: UL and CE Listed
	Power Output	Two (2) RJ-45 jacks. For remote powering up to two (2) radiators.
	Power Line Cord	North America, Type B. (LT-82-01)
		Asia, UK, Type G. (LT-82-02)
		Euro Type J. (LT-82-03)

Physical	Dimensions (H x W x D)	1.75 x 8.50 x 9.13 in (4.5 x 21.5 x 23 cm)
	Color	Dark grey with white silk screening
	Unit Weight	2.6 lbs (1.18 kg)
	Unit Weight with LA-205 Power Supply	3.8 lbs (1.72 kg)
	Shipping Weight	4.4 lbs (2.00 kg)
	Rack Mounting	One (1) rack space high (1U), 1/2 rack space wide. One (1) or two (2) transmitters can be mounted in a single rack space. Optional rack mount (LA-326) not included.

Environmental	Temperature - Operation	14 °F (-10 °C) to +104 °F (40 °C)
	Temperature - Storage	-4 °F (-20 °C) to +122 °F (50 °C)
	Humidity	0 to 95% relative humidity, non-condensing

•Specifications are subject to change with out notification.

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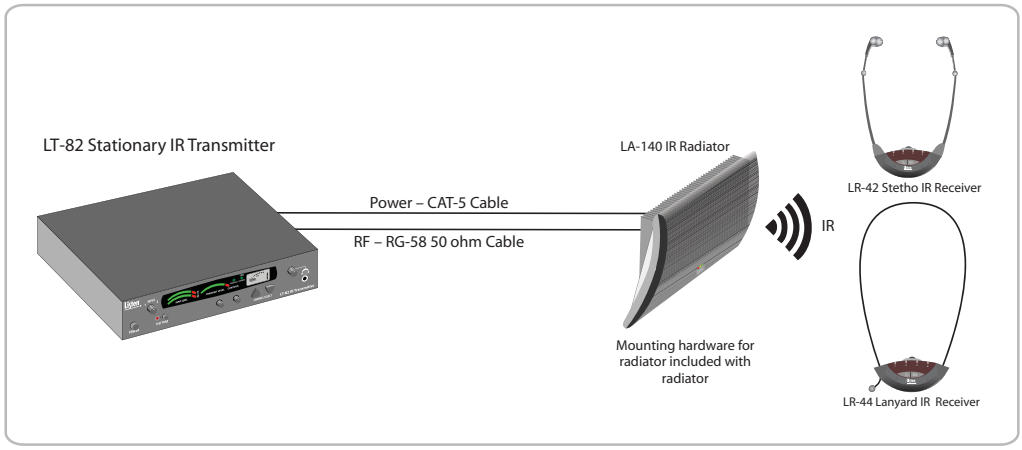
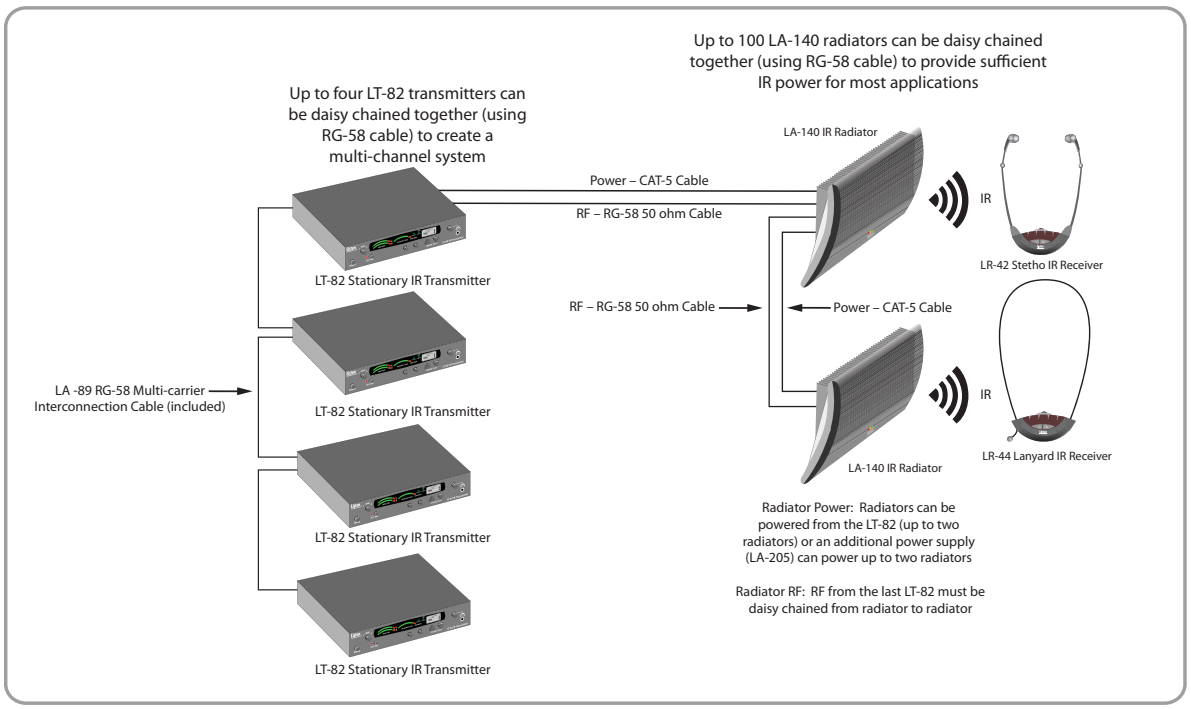
Stationary IR Block Diagram
Basic Single Channel/Single Radiator System



Stationary IR Block Diagram Multi-Channel/Radiator System



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Related Systems

LS-80 – Basic Stationary IR System
Includes:
(1) LT-82-01 Stationary IR Transmitter
(1) LA-140-GY Stationary IR Radiator
(4) LR-42 Stationary IR Stethoscope 4-Channel Receiver
(4) LA-363 High Capacity AAA Alkaline Batteries (2)
(1) LA-304 Assistive Listening Notification Signage Kit

LS-81 – Performance Stationary IR System
Includes:
(1) LT-82-01 Stationary IR Transmitter
(1) LA-326 Universal Rack Mounting Kit
(2) LA-140-GY Stationary IR Radiator
(4) LR-42 Stationary IR Stethoscope 4-Channel Receiver
(4) LA-363 High Capacity AAA Alkaline Batteries (2)
(1) LA-351 Stationary IR Storage Station
(1) LA-304 Assistive Listening Notification Signage Kit

LS-82 – Advanced Installed IR System
Includes:
(1) LT-82-01 Stationary IR Transmitter
(1) LA-326 Universal Rack Mounting Kit
(2) LA-140-GY Stationary IR Radiator
(8) LR-42 Stationary IR Stethoscope 4-Channel Receiver
(8) LA-364 NiMH Rechargeable Battery Pack for Stationary IR Receivers
(1) LA-350-01 8-Unit IR Charging/Storage Station
(1) LA-304 Assistive Listening Notification Signage Kit

LS-83 – 4-Channel, 48-Listener Stationary IR System
Includes:
(4) LT-82-01 Stationary IR Transmitter
(2) LA-326 Universal Rack Mounting Kit
(3) LA-89 Interconnection Coaxial Cable
(8) LA-140-GY Stationary IR Radiator
(48) LR-42 Stationary IR Stethoscope 4-Channel Receiver
(48) LA-364 NiMH Rechargeable Battery Pack for Stationary IR Receivers
(6) LA-350-01 8-Unit IR Charging/Storage Station
(2) LA-304 Assistive Listening Notification Signage Kit

LS-84 – Expanded Performance (2-Channel) Stationary IR System
Includes:
(2) LT-82-01 Stationary IR Transmitter
(1) LA-326 Universal Rack Mounting Kit
(1) LA-140-GY Stationary IR Radiator
(5) LR-42 Stationary IR Stethoscope 4-Channel Receiver
(5) LA-364 NiMH Rechargeable Battery Pack for Stationary IR Receivers
(1) LA-350-01 8-Unit IR Charging/Storage Station
(1) LA-304 Assistive Listening Notification Signage Kit

LS-85 – Expanded Basic Stationary IR System
Includes:
(1) LT-82-01 Stationary IR Transmitter
(1) LA-326 Universal Rack Mounting Kit
(1) LA-140-GY Stationary IR Radiator
(3) LR-42 Stationary IR Stethoscope 4-Channel Receiver
(1) LR-44 Stationary IR Lanyard 4-Channel Receiver
(1) LA-166 Neck Loop
(1) LA-165 Stereo Headphones
(4) LA-363 High Capacity AAA Alkaline Batteries (2)
(1) LA-304 Assistive Listening Notification Signage Kit

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Frequently Asked Questions

Q How many carriers does the LT-82 produce?
A One.

Q How many carriers can be produced simultaneously in a room?
A Four. You will need one (1) LT-82 per carrier.

Q How do you interconnect multiple LT-82 units?
A Units are daisy chained using a short piece of coax cable (supplied with each LT-82).

Q Is there any performance degradation in stereo mode?
A Yes, stereo operation raises the noise floor slightly.

Q Can I operate some channels in mono and others in stereo?
A Yes.

Q How many radiators does the LT-82 power?
A The LT-82 powers up to two (2) Listen LA-140 radiators.

Q How are radiators connected to the LT-82?
A The carrier (signal) is connected using coax cable; power is connected using standard CAT-5 cabling.

Q Can the LT-82 be operated on 230 VAC?
A Yes, the LT-82 has a universal power supply that can be used anywhere in the world.

Q What happens if the radiator power cable is shorted?
A To protect the system, the LT-82 will shut down the power to the radiator cable until the problem is eliminated.

Q Can I use the LT-82 with other manufacturers' radiators?
A Yes, but the LT-82 will not power those radiators.

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