LT-82 Stationary IR Transmitter

Don't miss a single sound. Listen®

www.listentech.com

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 or more IR radiator-emitters (LA-140). The LT-82 can be operated in mono or stereo on one of four different carriers; up to four LT-82 units may be connected to provide up to four mono or stereo carriers to the radiator(s). The LT-82 generates DC power to power up to two LA-140 radiator-emitters. Two LT-82 units can be rack mounted in one 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 channels mono, or four channels stereo – no need to sacrifice multiple channels to achieve stereo transmissions (one LT-82 is required for each channel)
- Transmitter can power two radiator-emitters (LA-140) using CAT-5 ecabling
- Easy to specify, install and use
- Outstanding performance – ensures crystal clear sound for listeners
- Limited lifetime warranty

Architectural Specification

The Stationary IR Transmitter shall be capable of broadcasting on four 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 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 58 db or better. The device shall have an audio frequency response of 63 Hz to 15 kHz, +/- 3db. It shall have two mixing audio inputs, one balanced XLR/phone input and one unbalanced RCA input. The device shall have the following audio controls: input level, transmit level, adjustable low pass filter 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 radiators over CAT-5 cable. The LT-82 is specified.

Requires

LA-140 IR Radiator

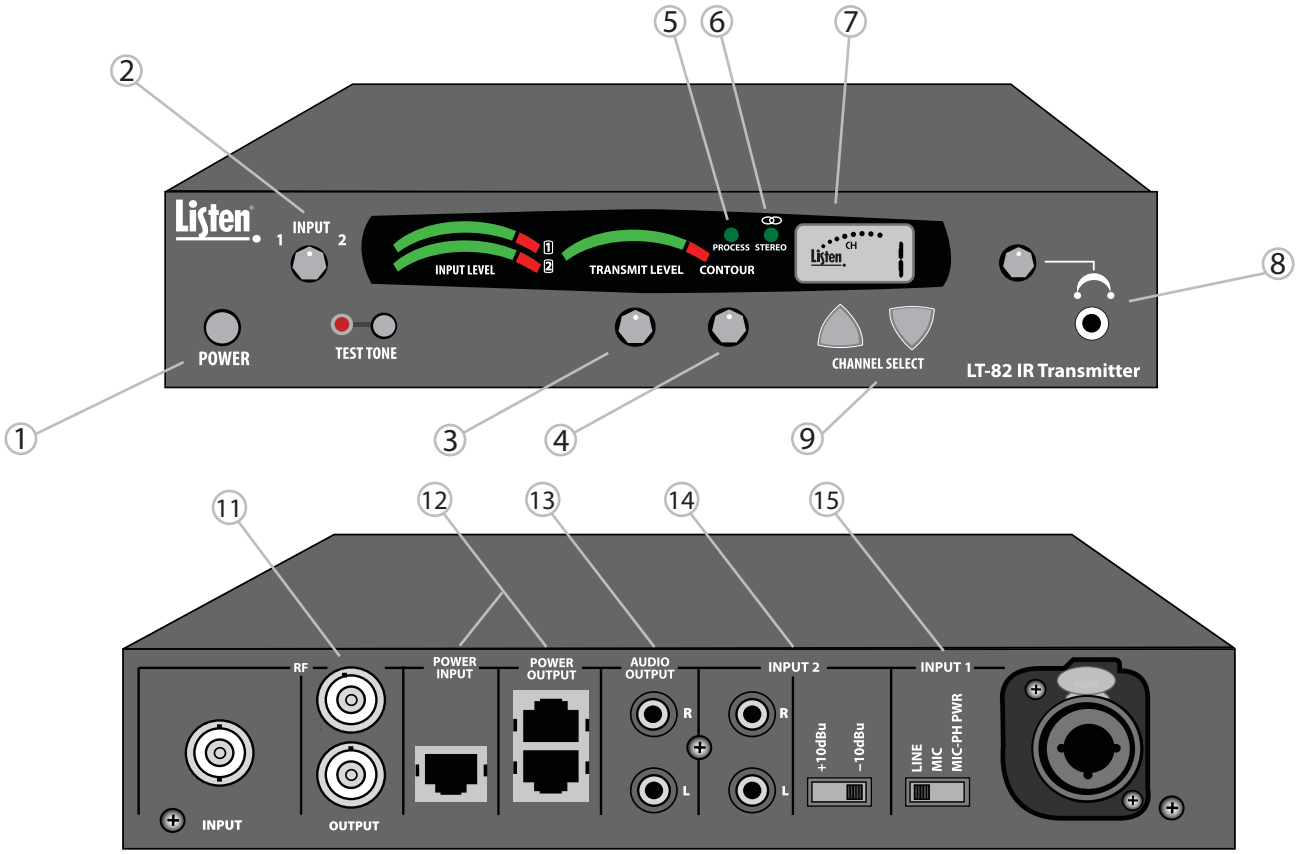
Used With

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

Includes

LT-82 IR Transmitter
LA-205 Universal Power Supply
LA-89 IR Interconnection Coaxial Cable
Quick Reference Card
System Manual

14912 Heritagecrest Way • Salt Lake City • Utah • 84065-4818 801.233.8992 • 800.330.0891 North America • 801.233.8995 fax



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 radiators. "Power Input" is from the power supply, "Power Output" is to the radiators.
13. Two phono connectors for a mixed output of Inputs 1 and 2.
14. Two 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).

Accessories

LA-326 Universal
Rack Mounting Kit-
will mount up to two LT-82 units

LA-112
RG-58 50 Ohm Coaxial Cable
specify length

LA-70
CAT-5 Cable
specify length

LA-391
RG-58/50 Ohm Coaxial Cable
preassembled, specify length

LA-115
RG-58 BNC to
BNC Coupler

LA-127
RG-58 BNC Connector

LA-393
RJ-45/CAT-5
preassembled, specify length

LA-71
RJ-45 CAT-5 Connector
(Pkg. of 10)

LA-72
RJ-45 to RJ-45 CAT-5 eCoupler

	Specification	LT-82
RF	Carrier Frequencies	2.3 MHz, 2.8 MHz, 3.3 MHz, 3.8 MHz
	Number of Channels	Four channels. Selectable one 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	(2) BNC connectors, for connection to radiator(s) and/or additional transmitter(s). 100 mV, 50 ohm, -10 dbm
	RF Input	(1) BNC connector, for connection from additional transmitter(s). 100 mV, 50 ohm, -10 dbm
	Compliance	FCC Part 15, Industry Canada, CE

Audio	** All system specifications are wireless end-to-end	
	System Frequency Response	63Hz - 15kHz (+/- 3dB)
	System Signal to Noise Ratio (A-weighted)	>58dB
	System Distortion	<2% total harmonic distortion (THD)
	Audio Input 1	Mono Input (Rear Panel). Female-XLR and 1/4 in combo connector, balanced, 0/-55dBu (line/mic) nominal input level adjustable; -30/+21dBu (mic/line) maximum input level; impedance 20k/1k ohms (line/mic); phantom power +12VDC
	Audio Input 2	Stereo or Mono Input (Rear Panel). (2) Phono connectors, unbalanced, -10/+10dBu nominal input level adjustable, +30dBu maximum, impedance 100k ohms
	Audio Processing	Compression can be turned on/off. Slope adjustable from 1:1 to 4:1. Default 2:1
	Contour	Cuts and boosts frequencies above 5 kHz
	Combined Audio Output (Mix)	Input 1 and Input 2 Mixed Output (Rear panel). (2) Phono connectors, unbalanced, -10dBu nominal output level, +19dBu maximum, impedance 10 ohms.
	Headphone Output (Monitor)	Front panel. (1) 3.5mm connector, unbalanced, adjustable output level, +7dBu maximum, impedance 10 ohms. 100mW, 32 ohms, 3.5mm stereo.

Controls	Front Panel	Power, Test Tone on/off, Channel up/down, Input Level, Transmit Level, Contour, Headset Level
	Rear Panel	Input 1 Level (Line, Mic, Mic-Phantom Power), Input 2 Level (-10/+10 dBu), RF Power (low, mid, high)
	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

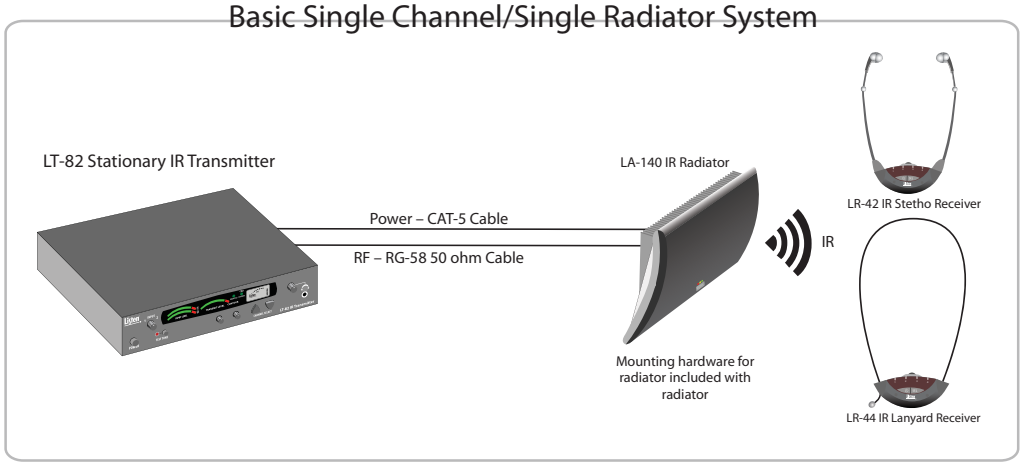
Indicators	Unit Power	Red LED illuminates when the unit is powered up (front panel)
	Input 1, Input 2, Transmit Level	Indicates Input 1, Input 2, and Transmit audio levels. 10 segment LEDs (8 Green, 2 red)
	Stereo	Indicated by a green LED when on (front panel)
	Processing	Indicated by a green LED when on (front panel)
	RF Power	Indicates carrier is active on the LCD Display (front panel)
	LCD Display	Channel designation, lock status, RF Power, 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	(2) RJ-45 jacks. For remote powering up to two radiators.

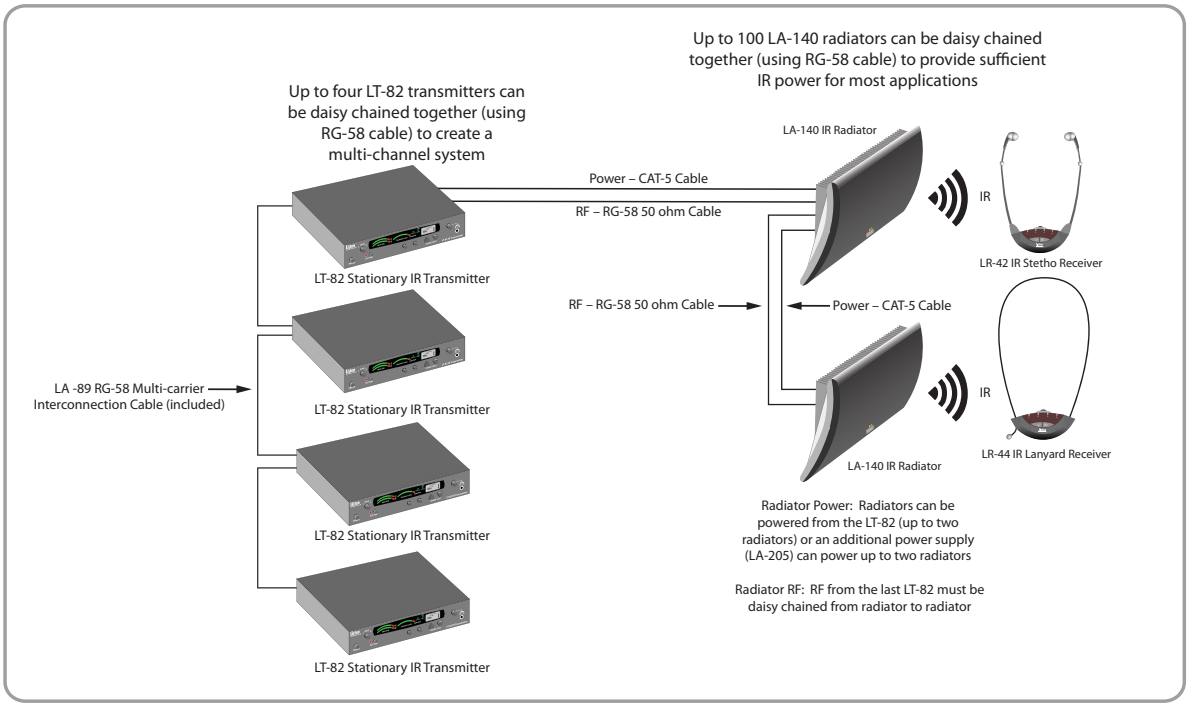
Physical	Dimensions (H x W x D)	1.75 x 8.5 x 9.125 in (4.5 x 21.5 x 23 cm)
	Color	Dark grey with white silk screening
	Unit Weight	2.6 lbs (5.7 kg)
	Unit Weight with LA-205 Power Supply	3.8 lbs (8.3 kg)
	Shipping Weight	4.4 lbs (9.7 kg)
	Rack Mounting	1 rack space height, 1/2 rack space wide. One or two transmitters can be mounted in onr rack space. Optional rack mount (LA-326) not included.

Environmental	Temperature - Operation	-10 C (14 F) to +40 (104 F)
	Temperature - Storage	-20 C (-4 F) to +50 (122 F)
	Humidity	0 to 95% relative humidity, non-condensing
•Specifications are subject to change with out notification.		

Stationary IR Block Diagram
Basic Single Channel/Single Radiator System



Stationary IR Block Diagram Multi-Channel/Radiator System



Related Systems

LS-80-SIR – Basic Stationary IR System
Includes:
(1) LT-82 Stationary IR Transmitter
(1) LA-140 Stationary IR Radiator
(4) LR-42 Stethoscope 4-Channel IR Receivers
(4) LA-363 High Performance AAA Alkaline Battery sets (Pkg of 2)
(1) LA-304 ADA Compliance Signage Kit

LS-81-SIR – Performance Stationary IR System
Includes:
(1) LT-82 Stationary IR Transmitter
(1) LA-326 Universal Rack Mounting Kit
(2) LA-140 Stationary IR Radiator
(4) LR-42 Stethoscope 4-Channel IR Receivers
(4) LA-363 High Performance AAA Alkaline Battery sets (Pkg of 2)
(1) LA-351 8-Unit IR Receiver Storage Station
(1) LA-304 ADA Compliance Signage Kit

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

LS-83-SIR – 4-Channel, 48-Listener Stationary IR System
Includes:
(4) LT-82 Stationary IR Transmitter
(2) LA-326 Universal Rack Mounting Kit
(8) LA-140 Stationary IR Radiator
(48) LR-42 Stethoscope 4-Channel IR Receivers
(48) LA-364 NiMH Rechargeable Battery Pack
(6) LA-350 8-Unit IR Receiver Charging/Storage Station
(2) LA-304 ADA Compliance Signage Kit

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 LT-82 per carrier.

Q How do you interconnect multiple LT-82 units?

A Units are daisy chained using a short piece of RG-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 Listen LA-140 radiators.

Q How are radiators connected to the LT-82?

A The carrier (signal) is connected using RG-58 coaxial 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.