LA-140 Stationary IR Radiator

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The LA-140 IR radiator/emitter packs high infrared power in a small and attractive design, with your choice of grey or white packaging. Designed for easy installation using standard components, the LA-140 is powered via CAT-5 cabling while the RF modulated carriers are delivered via standard coax cable. Mounting brackets are included for wall, ceiling, desk, mic stand and tripod mounting. Power can be supplied by the LT-82 transmitter or from a separate power supply (LA-205). Built-in delay compensation prevents signal cancellation (multi-path) problems and eliminates the piled-up cabling that is required with other systems. The LA-140 is used for government compliance (such as ADA), assistive listening, language interpretation, live theatre, houses of worship, courtrooms, secure rooms and for auditory description.

Configuration

LA-140-GY (Grey)
LA-140-WH (White)

Highlights

- Outstanding coverage - 10,000 ft² (929 m²).
- Two (2) radiators can be powered from a single LT-82 transmitter or optional power supply using standard CAT-5 cabling - eliminating the need for multiple cables.
- White or grey color - allows for a variety of aesthetic settings.
- Includes wall, ceiling, desk, mic stand and tripod mounting brackets - gives multiple options for mounting.
- Units can be horizontally or vertically mounted together - doubles the power in a small footprint.
- Radiator diodes are turned off if no audio signal is present at the transmitter after 30 minutes - saves radiator diode life.
- Delay compensation - ensures no drop out in the IR signal.

Requires

LT-82 Stationary IR Transmitter

Used With

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

Architectural Specification

The radiator-emitter shall have a single carrier transmitting area of no less than 10,000 ft² (929 m²) or greater for each radiator specified when used with specified receiver. The radiator shall be powered via CAT-5 cabling and the RF from the transmitter shall be carried by 50 ohm coaxial cable. The radiator shall have three indicating LEDs for power, no carrier present and carrier present. The radiator LEDs shall be deactivated after 30 minutes if there is no audio signal present from the transmitter. The radiator shall come in a white or grey color and shall include all of the mounting hardware capable of mounting the radiator on a wall, on a ceiling, in a corner, on a desk, on a mic stand or on a tripod. The Listen LA-140 is specified.

Includes

LA-140 Stationary IR Radiator
Mounting hardware for one unit (allows for wall, ceiling, desk, mic stand and tripod mounting)
25 ft. (7.6 m) of coax cable, matched color
25 ft. (7.6 m) of CAT-5 cable, matched color
Quick Reference Card

Listen Technologies Corporation • 14912 Heritagecrest Way • Bluffdale • Utah 84065-4818 U.S.A.
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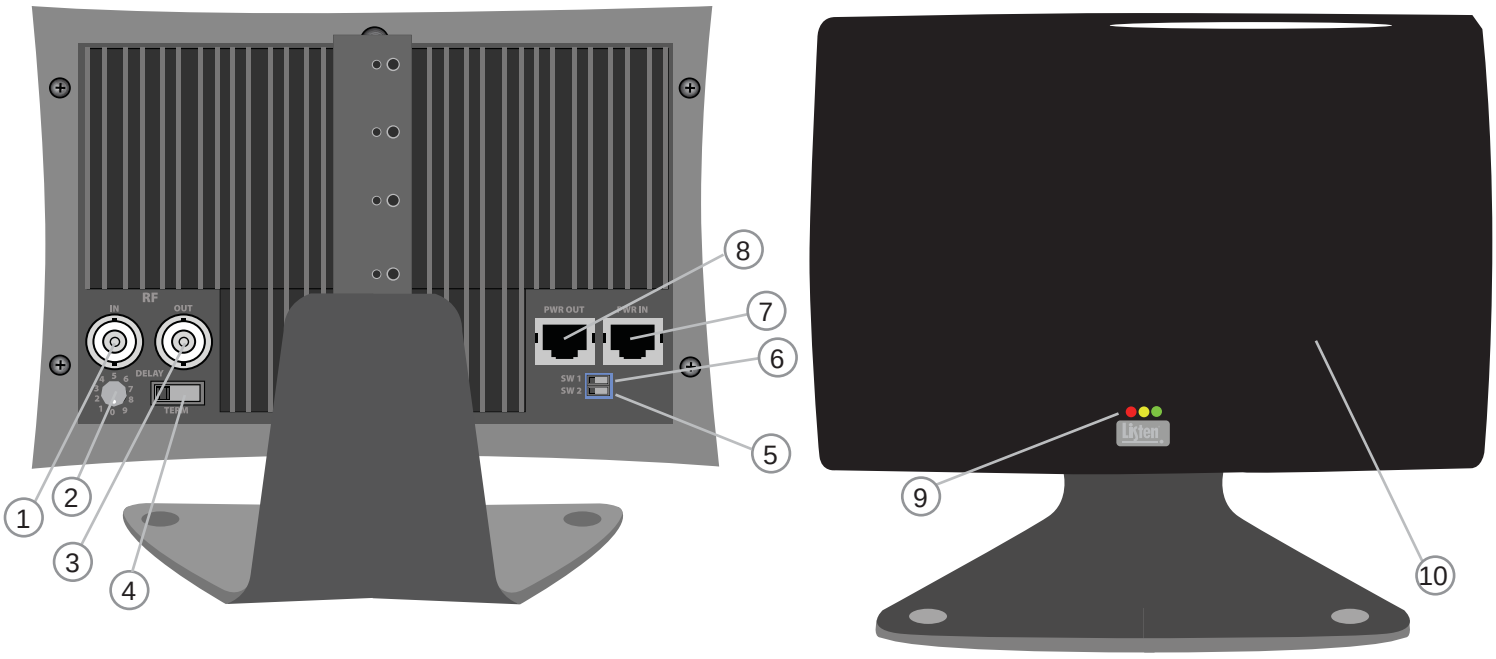

Product Features

1. RF input connector - this is the connection from the LT-82 transmitter or from the output of another radiator.
2. Delay compensation - allows you to set different delays so all radiators have the same timing. This prevents drop-outs caused by signals out of phase.
3. RF output connector - use this to send the RF input to another radiator.
4. Termination Switch - use to terminate the coaxial cable.
5. Compatibility switch - use this switch when using a non-Listen transmitter.
6. LED illumination switch - use this to turn on/off the illumination of the front panel LEDs.
7. Power connection from LT-82 transmitter or optional power supply (LA-205).
8. Power connection to (optional) second radiator.
9. LEDs - Three LEDs that indicate *power, no carrier present* and *carrier present.*
10. Color: Two different colors. Available in Grey (LA-140-GY) or White (LA-140-WH). Mounting brackets and supplied cables match the radiator.

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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-391 RG-58 50 Ohm Preassembled Coaxial Cable (Per ft.)
LA-393 CAT-5e Preassembled Cable (Per ft.)

LA-337

Mounting

LA-337 IR Radiator Floor Stand
LA-342 Stationary IR Dual Radiator Mounting Bracket

LA-205-(01,02,03)

Power Supply

LA-205-(01,02,03) 30 VDC Extension/Replacement Power Supply for LA-140/LT-82

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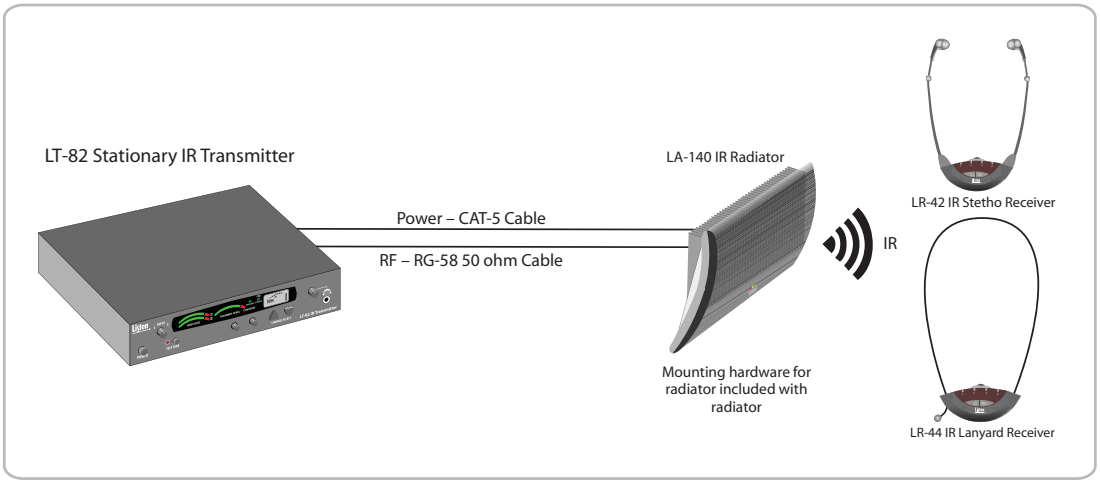
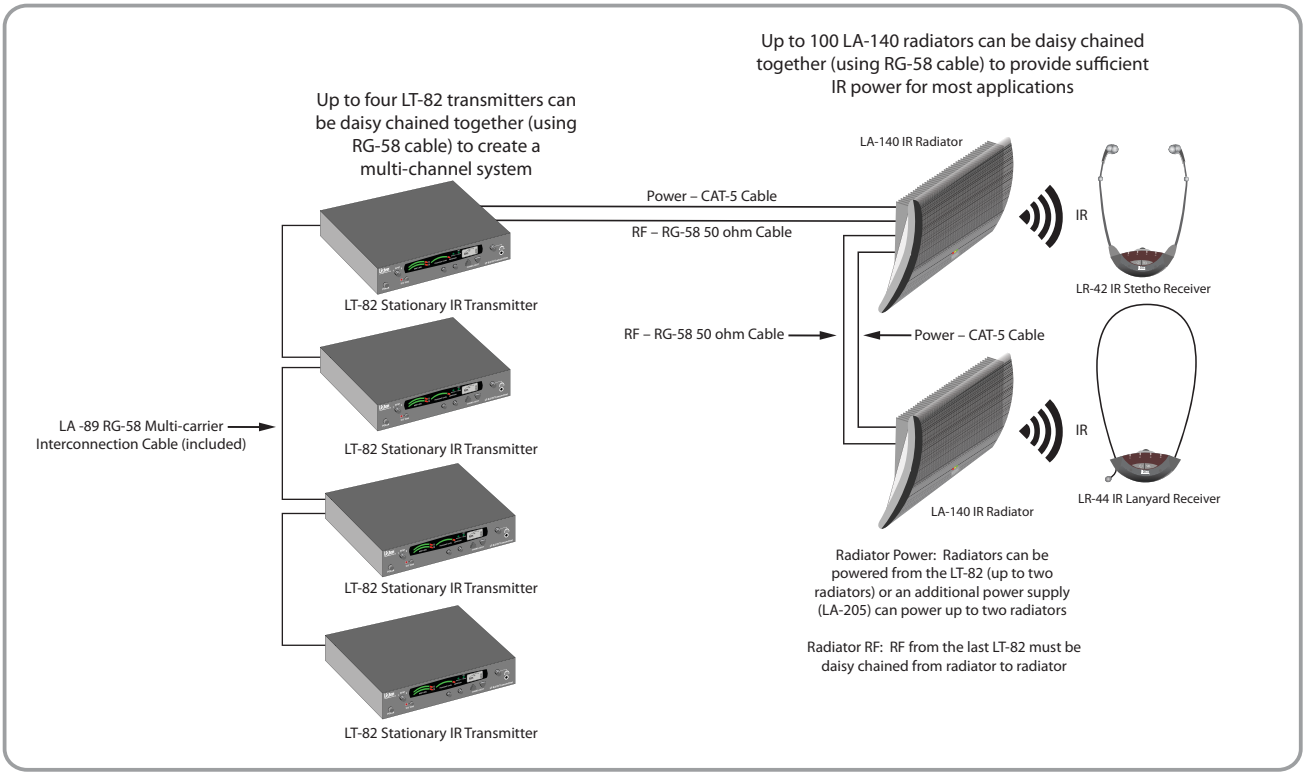
Specifications		LA-140
RF	Frequency Range	1 MHz - 5 Mhz
	Input	BNC Connection. -25dbm to -5dbm input nominal
	Output	BNC Connection. -15 dbm nominal
	Compliance	FCC Part 15, Industry Canada, CE, RoHS
	Coverage Area	10,000 f^2 (929 m^2) when used with Listen Receivers
Controls	User Controls	Termination Switch, Delay Compensation Switch, Indicator LEDs on/off, Compatibility Switch
Indicators	Red LED	Indicates power is present
	Yellow LED	Indicates no connection to transmitter or radiator
	Green LED	Indicates carrier and power are present and radiator is emitting IR signal.
Power	Input	RJ-45 connector. 30 VDC, powered from transmitter via CAT-5 cable or optional LA-205 power supply.
	Output	RJ-45 connector. 30 VDC, powers up to one additional radiator. (Maximum two radiators powered from each LT-82 transmitter or LA-205 power supply)
	Emitter Power	3 W
Physical	Dimensions (H x W x D)	5.50 x 8.00 x 2.60 in. (140 x 203 x 66 mm)
	Color	LA-140-GY (Grey), LA-140-WH (White)
	Unit Weight	2.1 lbs. (0.95 kg)
	Unit Weight with Wall/ Ceiling Mounting hardware	2.4 lbs. (1.09 kg)
	Shipping Weight	4.0 lbs. (1.81 kg)
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

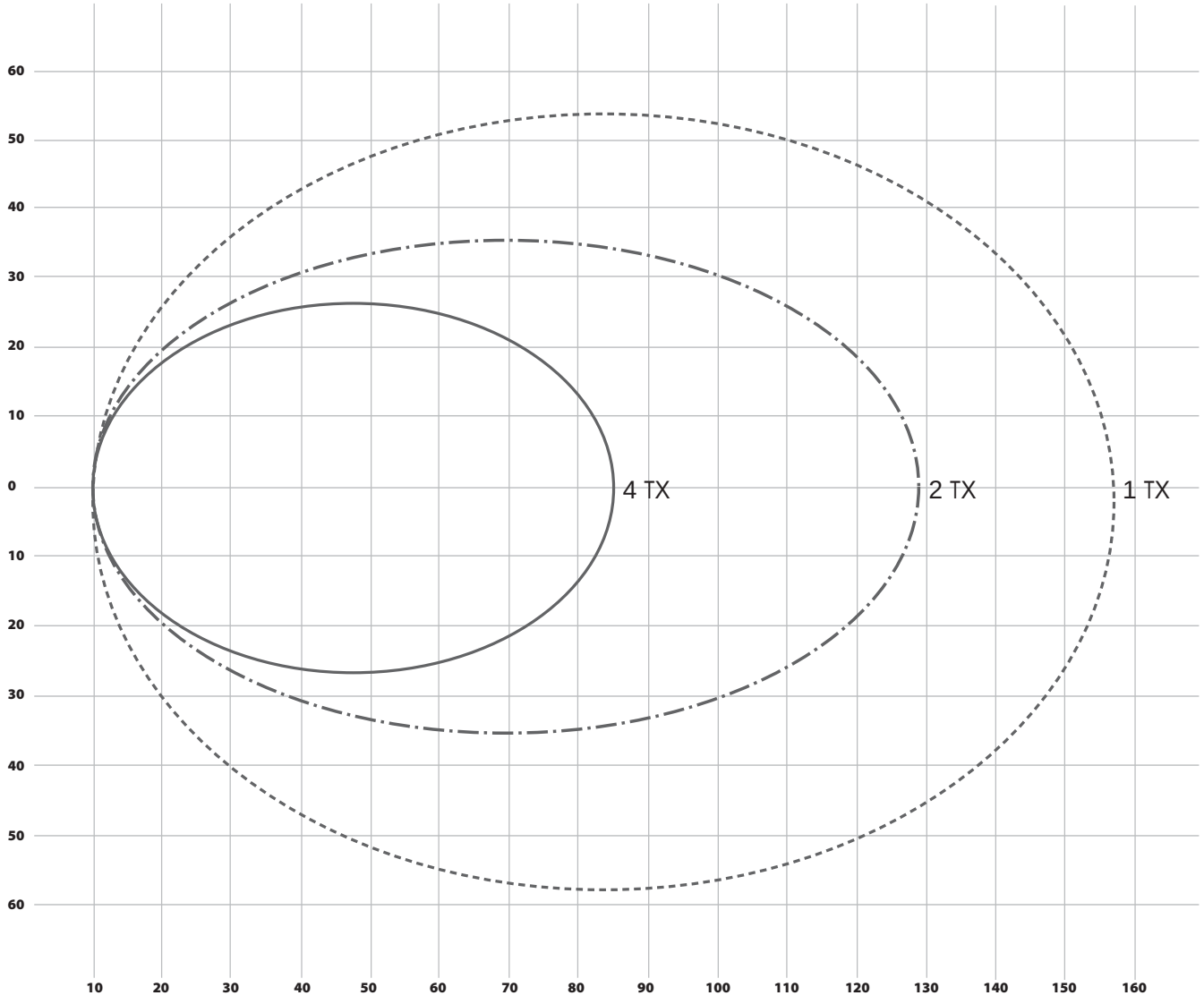
Stationary IR Block Diagram
Basic Single Channel/Single Radiator System



Stationary IR Block Diagram Multi-Channel/Radiator System



Radiator Footprint



Except in small rooms it is recommended that at least two radiators be used to ensure good coverage and minimal shading. Listen radiators (when used with Listen receivers) will cover approximately 10,000 sf (929 sm) for one channel as indicated in the diagram below (note the coverage decreases as the number of channels goes up). For two channels, one radiator will cover 5,000 sf (465 sm) and for four channels, one radiator will cover 2,500 sf (232 sm).

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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 much coverage is provided with the LA-140?

A Approximately 10,000 ft² (929 m²).

Q Does the number of audio sources (carriers) affect the coverage?

A Yes. For two sources (carriers), the coverage per carrier is half of 10,000 ft² (929 m²). For four carriers, the coverage per carrier is one-fourth.

Q How many radiators will I need?

A Refer to the technical resource section of the Listen website for assistance in making this calculation.

Q Does the LA-140 come with a power supply?

A No. You must use either the power supply included with the LT-82 transmitter or purchase the optional LA-205 power supply.

Q How is power delivered to the radiator?

A Power is delivered with CAT-5 cables (connected between the radiator and either the LT-82 transmitter or the optional LA-205 power supply).

Q How many radiators can be powered from the LT-82 or LA-205 power supply?

A Two.

Q What is the purpose of the delay compensation switch?

A This switch allows you to set up delay timing in a multi-radiator system so that each radiator receives the carrier at exactly the same time. This prevents signal dropouts that can be caused by out-of-phase signals (multi-path). With Listen's delay compensation switch, it is not necessary to cut all of your coax cables to the same length - your shorter runs can use shorter cables, keeping your installation clean (and cost-effective).

Q How do I connect multiple radiators?

A You can daisy-chain the radiators together using coax cables. Power for up to two radiators can be daisy-chained using a short length of CAT-5 cabling or you can power two radiators off one transmitter.

Q Can I disable the LEDs on the radiator?

A Yes, the LEDs can be turned off at a switch on the back of the radiator.

Q How many emitting diodes does the LA-140 have?

A The LA-140 radiator has 84 diodes. It has 7 columns of diodes with 12 diodes each. If one diode goes out, you will lose only the diodes on that column.

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