

# Stationary IR Product Type Brochure

Don't miss a single sound. **Listen**<sup>®</sup>  
[www.listentech.com](http://www.listentech.com)

SOUNDFIELD FM  
PORTABLE FM  
STATIONARY FM  
STATIONARY IR  
WIRELESS AUDIO DISTRIBUTION  
DISCUSSION  
DIGITAL CONFERENCING  
DIGITAL IR

ASSISTIVE LISTENING • CONFERENCING • TOUR GROUP • SOUNDFIELD • LANGUAGE INTERPRETATION



## Don't miss a single sound. Listen.

Listen Technologies Corporation believes in experiencing every sound, whether it's the carefully chosen words of a presiding judge or the subtleties of expression emanating from an orchestra's string section. It's all a part of the experience, and Listen is dedicated to making sure every individual hears every sound.

Listen's line of stationary infrared (IR) products deliver on this promise by providing a carefully tuned system of products. Listen makes the process of specifying, ordering, installing, and using the system simple and straight forward. A Listen IR system fills the room with non-visible infrared light. Each receiver detects the IR light and turns it into sound ensuring every individual can be part of the total experience. Because it's light, the IR signal never leaves the room and it cannot be received out of the room, thereby creating a secure environment with no concern of eavesdropping.

**Don't miss a single sound. Listen.**

### Places of Worship

Members of a congregation come to their places of worship looking for words of encouragement and enlightenment. A Listen system ensures that each individual can fully enjoy this experience. Using IR technology ensures that only those within the sanctuary receive the signal.

### Performing Art Centers



Imagine going to a theater performance and not being able to understand all that is being said. A Listen system delivers high quality sound to every listener in the theater, while ensuring the performance is not recorded outside of the main hall.

### Classrooms



Studies prove that students learn more when they can hear well. A Listen system delivers the voice of the instructor directly to their ears. Because IR signals are isolated to each room, the same receiver can be used for every classroom with the same settings. With a radio (RF) signal, the receiver must be tuned to different channels for each room.

### Language Interpretation



The key witness in a case is a student from Brazil and only speaks Portuguese. A Listen system delivers an interpreter's English version of the testimony to each of the jurors. Since the IR light will not leave the courtroom, the judge is not concerned about the testimony being heard outside of the courtroom.



# Listen Stationary IR System

There are three main components involved in the Listen Stationary IR system:

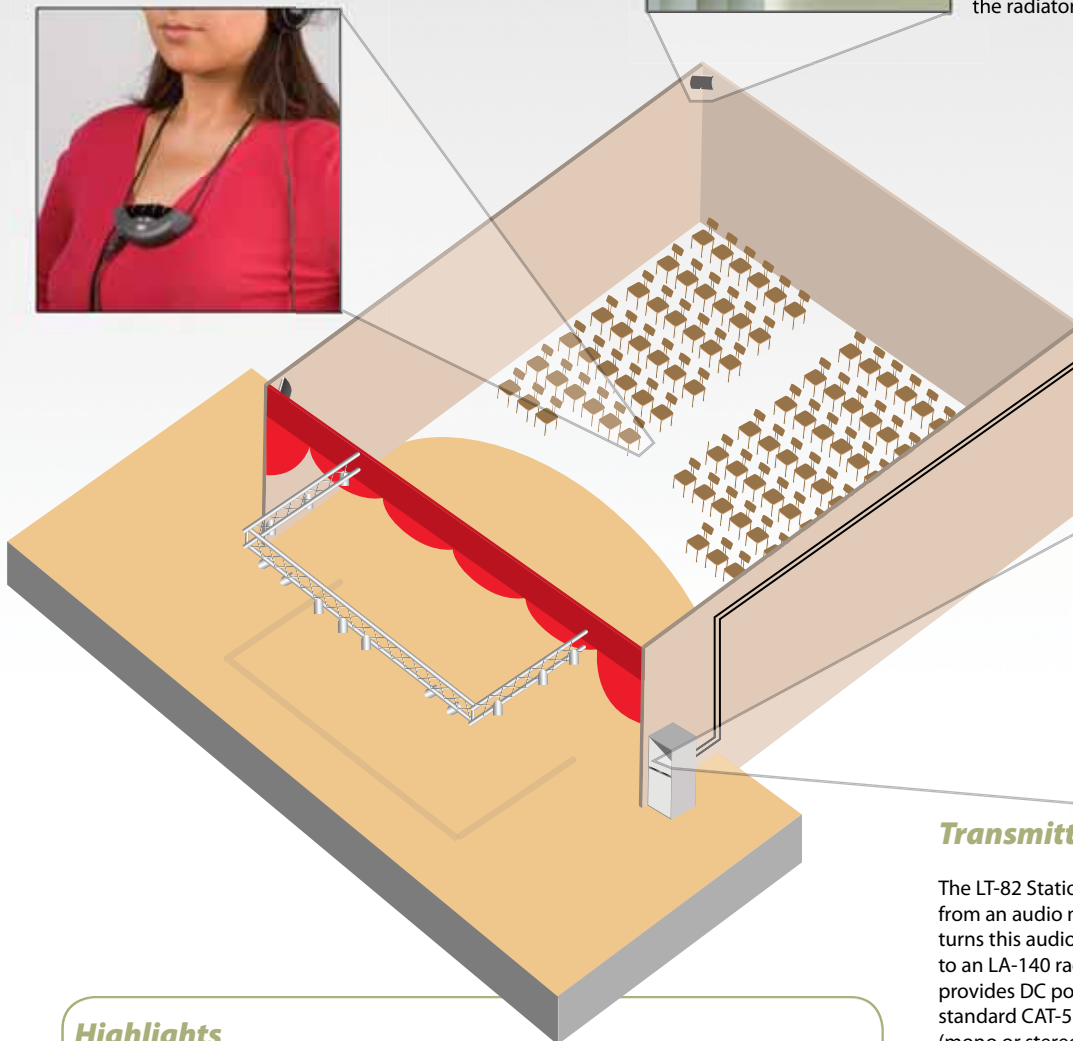
## Receiver(s)

The IR light from the radiators is detected by the receivers and turned into sound. Listen offers the LR-42 stethoscope and LR-44 lanyard style receivers. The stethoscope is an "all-in-one" unit, making it easy to keep track of checked out equipment. The lanyard receiver accepts any style of 3.5 mm earphone, giving users more choices.



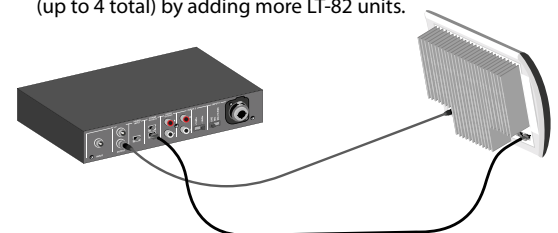
## Radiator(s)/Emitter(s)

The radiator transforms the RF audio signal from the LT-82 transmitters into an IR signal. This is essentially a "headlight" that illuminates the room with non-visible IR light. The size and shape of the room will determine how many radiators or "headlights" you'll need to fill the room for adequate signal coverage. It's powered by either the LT-82 transmitter or an LA-205 extension/replacement power supply. Hardware for most types of mounting configurations, comes standard with each radiator, and the radiator is available in two colors; grey or white.



## Transmitter(s)

The LT-82 Stationary IR Transmitter accepts audio from an audio mixing console or other sources. It then turns this audio signal into an RF signal and delivers it to an LA-140 radiator via coaxial cable. The LT-82 also provides DC power for up to two LA-140 radiators via standard CAT-5 cabling. For a single channel system (mono or stereo) use one LT-82. Add more channels (up to 4 total) by adding more LT-82 units.



Two cables connect the LT-82 Transmitter to the radiator(s). CAT-5 cable is used for power, and coaxial cable is used for the signal. When more than one radiator is needed, they can be daisy-chained using the same type of cable. One LT-82 can power up to two

## Highlights

- Simple to specify, install, maintain, and use.
- Secure – the signal will not leave the room.
- Up to four simultaneous mono or stereo channels allows for expanded applications.
- Uses higher modulation (2.3 to 3.8MHz) frequencies thereby decreasing the risk of light interference from fluorescent lights and other sources.
- Installation is simple using CAT-5 cables for power distribution.
- The radiator mounting hardware is included with each radiator.
- Users will enjoy the simple but refined look and feel of both the stetho and lanyard receivers.
- Advanced battery management ensures long battery life.
- Uses standard AAA alkaline batteries or an optional rechargeable pack (LA-364).
- Compatible with other manufacturers.
- Limited lifetime warranty (radiator – 3 years and accessories 90 days).

# LT-82 Stationary IR Transmitter

The Listen LT-82 is the heart of the stationary IR listening system. It takes the desired audio signal and sends it via coaxial cable to one or more IR radiator(s) (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 radiators. Two LT-82 units can be rack mounted in one rack space using the universal rack mount kit (LA-326). The LT-82 is used for government compliance (such as ADA), assistive listening, language interpretation, live theatre, houses of worship, courtrooms, secure rooms, and auditory description.

## Highlights

- Use up to four LT-82 units to create a 1 to 4 (mono or stereo) channel system.
- The LT-82 will power up to two LA-140 radiators.
- Several audio input configurations to fit most installations.
- Audio processing can be activated as desired.



- 1 Audio Section** The input level of inputs 1 and 2 are adjusted by the INPUT control and are indicated on the first two VU meters. Final transmit level is adjusted with the TRANSMIT LEVEL control. The CONTOUR control boosts or cuts audio above 5 kHz. The PROCESS indicator is illuminated when the internal audio processor is activated. The STEREO indicator is illuminated when the stereo encoder is activated. A test tone is available to aid in set up.
- 2. Transmit Section** Use the UP and DOWN buttons to select the transmission channel. The LCD conveniently shows the selected channel, radiation status (on or off), lock and programming status.
- 3. Monitor Section** You can listen to the transmitted audio using the monitor jack and volume control.
- 4. RF Section** RF is delivered to the radiators using the two RF OUTPUT BNC connectors. If more than one channel is required, daisy chain multiple LT-82 units together.
- 5. Power Section** Connect the universal power supply (included) to the unit with the POWER INPUT RJ-45 connector. The POWER OUTPUT connectors are used to power up to two LA-140 radiators.
- 6. Audio Output Section** The stereo, line level phono connectors provide an output consisting of a mix of inputs 1 and 2.
- 7. Audio Input Section** Connect your audio source to inputs 1 and/or 2. Input 1 accepts a mono 3-pin XLR or phone connector with balanced, selectable mic, phantom mic or line level audio. Input 2 accepts stereo phono connectors and is unbalanced with selectable input levels of -10 and +10dBu.

## Key Specifications

- Input voltage 100-240VAC, 47-63Hz.
- System audio performance 63-15KHz frequency response, >60dB signal to noise ratio (SNR) and <2% total harmonic distortion (THD).

## Configurations

- LT-82-01 North America
- LT-82-02 Asia, UK
- LT-82-03 Europe

## Accessories

Accessories for the LT-82 can be found on the Stationary IR Accessories page 6.

# LA-140 Stationary IR Radiator/Emitter

The LA-140 IR radiator/emitter packs high infrared power in a small and attractive design, in your choice of grey or white colors. 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 coaxial 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 auditory description.

## Highlights

- Architecturally friendly design with white or grey color options.
- Simple to install using CAT-5 and coax cables.
- Mounting hardware included makes every installation simple.
- Double radiator mounting options for twice the power.
- Delay compensation adjustments built in.
- 25 feet (7.6 m) of CAT-5 and coaxial cable are included with the radiator.



- 1. LED Indicators** The three colored LEDs provide visual indication of power, connectivity, and the presence of a signal. These LEDs can be deactivated in light sensitive rooms.
- 2. Mounting Hardware and Cable** Installation is quick and easy with the included mounting hardware for wall, ceiling, desk (shown), mic stand or tripod. Listen also includes 25 feet (7.6 m) of CAT-5 and coaxial cables (including connectors).
- 3. RF Section** RF from the LT-82 or another radiator is accepted at the RF INPUT BNC. The RF OUTPUT jack feeds RF to additional LA-140 radiator(s). The delay compensation adjustment ensures that all RF signals are transmitted by the radiator at the same time, thereby eliminating receiver drop outs created when signals are out of phase. The TERMINATION switch terminates the coaxial cable on the last radiator in the daisy chain.
- 4. Power Section** The CAT-5 POWER INPUT connector accepts power from the LT-82 transmitter, from an optional LA-205 power supply or from another LA-140 radiator. The POWER OUTPUT connector provides power for up to one additional radiator. The dip switches are for setting options.

## Key Specifications

- 10,000 ft<sup>2</sup> (929 m<sup>2</sup>) coverage (one channel) when used with Listen receivers (half coverage per radiator with two channels, quarter coverage with four channels).
- CAT-5 and coaxial maximum cable length: 1,000 ft (305 m).
- One LT-82 Transmitter or one LA-205 Power Supply can power up to two LA-140 radiators.

## Configurations

- LA-140-GY Grey
- LA-140-WH White
  - with LA-205-01 North America
  - LA-205-02 Asia, UK
  - LA-205-03 Europe

## Accessories

Accessories for the LA-140 can be found on the Stationary IR Accessories page 6.

# LR-42/44 Infrared Receivers

Users will love the comfortable, easy to use Listen LR-42 and LR-44 Receivers that feature the ability to receive up to four channels in mono or stereo. They use standard AAA alkaline batteries for more than 30 hours of operation, or a NiMH rechargeable battery pack that delivers 15 hours of use per charge. The unit features auto shut-off after 30 minutes of no audio carrier, further extending battery life. The LR-42/44 boasts high performance audio specs in a small package and is compatible with other manufacturers' products. The LR-42/44 is used for government compliance (such as ADA), assistive listening, language interpretation, live theatre, houses of worship, courtrooms, secure rooms, and auditory description.

## Highlights

- Easy to use with outstanding audio performance.
- Users have the option of either the LR-42 stetho receiver, or the LR-44 lanyard receiver which is compatible with a variety of earphones.
- Auto-shut off extends battery life.
- Outstanding battery life (up to 30 hours).
- Uses standard AAA alkaline non-proprietary batteries, or rechargeable battery pack.
- LA-350 and LA-351 charging/storage platforms make it simple and easy to charge batteries, store and distribute units.
- Programmable options expand applications and simplify channel selection for users.



1. **User Buttons** Press the POWER button to turn the unit on or to check battery status after power up. The SEL button changes the channel.
2. **LED Indicators** When the SEL is pressed the LED indicators indicate which of the four channels is selected. If the POWER is pressed, the battery status is indicated.
3. **Volume Control** The user adjusts this to set the volume on the earphones.
4. **Battery** A removable battery compartment houses two AAA alkaline batteries, or a sealed NiMH rechargeable battery pack

## Key Specifications

- 30/15 hours battery life AAA alkaline/rechargeable batteries.
- 63-15kHz frequency response, 60dB SNR, <2% total harmonic distortion (THD).

## Configurations

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

## Accessories

Accessories for the Listen Receivers can be found on the Stationary IR Accessories page 6.



# Stationary IR Accessories and Systems

## Accessories

Listen provides a variety of accessories to meet your Stationary IR needs. Choose from Connectors/Cables, Batteries/Power Supplies, Charging/Storage Cases, Earphones, Mounting Options, and Microphones all providing outstanding performance for crisp, clear sound.

### Mounting Options



- LA-326 Universal Rack Mounting Kit
- LA-337 IR Radiator Floor Stand
- LA-342 Stationary IR Dual Radiator Mounting Bracket

### Power/ Storage Options



- LA-152 IR Receiver Battery Compartment (Non-Charging)
- LA-204 7.5 VDC Replacement Power Supply for Charging Systems
- LA-205 30 VDC Extension/Replacement Power Supply for LA-140/LT-82
- LA-363 High Capacity AAA Alkaline Batteries (2)
- LA-364 NiMH Rechargeable Battery Pack for IR Receivers
- LA-320 Configurable Carrying Case
- LA-350 8-Unit IR Charging/Storage Station
- LA-351 8-Unit IR Storage Station

### Earphones



- LA-161 Single Ear Bud
- LA-162 Stereo Ear Buds
- LA-164 Earspeaker
- LA-165 Stereo Headphones
- LA-166 Neck Loop
- LA-170 Behind-the-Head Stereo Earphones

## Stationary IR Systems

Listen's Stationary IR Systems meet the needs of the novice to the advanced user, offering a range of options for both budget and applications. The Basic Stationary IR System is ideal for venues wishing to comply with regulated assistive listening requirements. The Performance Stationary IR System is designed for installations that require mounting of the transmitter and the radiator. Use the Advanced Installed IR System for frequent applications needing great signal coverage.



Product Description	System Part Number					
	LS-80	LS-81	LS-82	LS-83	LS-84	LS-85
LT-82 Stationary IR Transmitter	1	1	1	4	2	1
LA-326 Universal Rack Mounting Kit		1	1	2	1	1
LA-140 Stationary IR Radiator	1	2	2	8	1	1
LR-42 IR Stethoscope 4-Channel Receiver	4	4	8	48	5	3
LR-44 IR Lanyard 4-Channel Receiver						1
LA-165 Stereo Headphones						1
LA-166 Neck Loop						1
LA-363 High Capacity AAA Alkaline Batteries (2)	4	4				4
LA-364 NiMH Rechargeable Battery Pack			8	48	5	
LA-350 8-Unit IR Charging/Storage Station			1	6	1	
LA-351 8-Unit IR Storage Station		1				
LA-304 Assistive Listening Notification Signage Kit	1	1	1	2	1	1

- For power cords add the following designators for selected region configuration:  
North America -01  
Asia, UK -02  
Europe-03
- To designate white or grey colors for the radiators add designators -WH or -GY.

### Example:

System Designator | Color  
Listen System — **LS-82-01-GY**

Each Stationary IR System delivers Listen's commitment to providing you with a customizable solution that is simple to specify, install, and use. You will enjoy outstanding performance with exceptional support from the Listen team.

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