

# LT-800 Stationary Transmitter



## Configuration

Stationary FM Transmitter (72 MHz)  
Stationary FM Transmitter (216 MHz)  
Stationary FM Transmitter (863 MHz)

Thanks to its outstanding audio quality, the Listen LT-800 Stationary Transmitter can be used in a variety of applications. The LT-800 is connected to your main audio system, broadcasting a high quality audio signal to belt pack receivers, stationary receivers, or wireless speaker / receivers. The end result – your audience can hear and understand the presentation better because of improved speaker placement or because they have their own belt pack and headset. The signature Look & Listen™ LCD shows channel, lock, programming and RF power.

## Highlights

- Superior Audio Quality – 80 dB (70 dB with 863 MHz) signal-to-noise ratio, setting the industry's sound quality standard.
- A choice between 57 channels (17 channels with 863 MHz), complete antenna and accessory options make Listen products ideal for a wide range of applications.
- Long transmission range ensures coverage for the entire venue.
- Designed for installation – Rack mountable with remote antennas make installation easy and service reliable.
- Use the test tone or monitor jack to verify audio is present.
- Advanced audio processing (can be deactivated) ensures audio levels are consistent to users.
- Limited Lifetime Warranty with hassle-free support.

## Includes:

LT-800 Stationary Transmitter  
LA-201 Replacement Power Supply for LT-800/LR-100/LR-600 (72 & 216 MHz)  
LT-800 manual (72 & 216 MHz)  
LA-129 Right Angle Articulating Antenna (863 MHz)  
LA-207 12 Volt DC Universal Power Supply (863 MHz)  
Line Cord (863 MHz)  
Quick Reference Card (863 MHz)  
Limited Lifetime Warranty Program Card (863 MHz)  
FM System Design Guide and Manual Card (863 MHz)

## Requires:

LA-101 Helical Top Mounted Antenna (72MHz)  
LA-102 Telescoping Top Mounted Antenna (216MHz)  
LA-106 Telescoping Top Mounted Antenna (72 MHz)  
LA-107 Ground Plane Remote Antenna (216 MHz)  
LA-116 Coaxial Dipole Remote Antenna (72MHz)  
LA-117 Coaxial Dipole Remote Antenna (216 MHz)  
LA-122 Universal Antenna Kit (72 and 216 MHz)  
LA-123 90° Helical Antenna (72 MHz)  
LA-124 90° Degree Helical Antenna (216 MHz)  
LA-129 90° Articulating Antenna (863 MHz)

## Architectural Specification

### LT-800-072/216 MHz

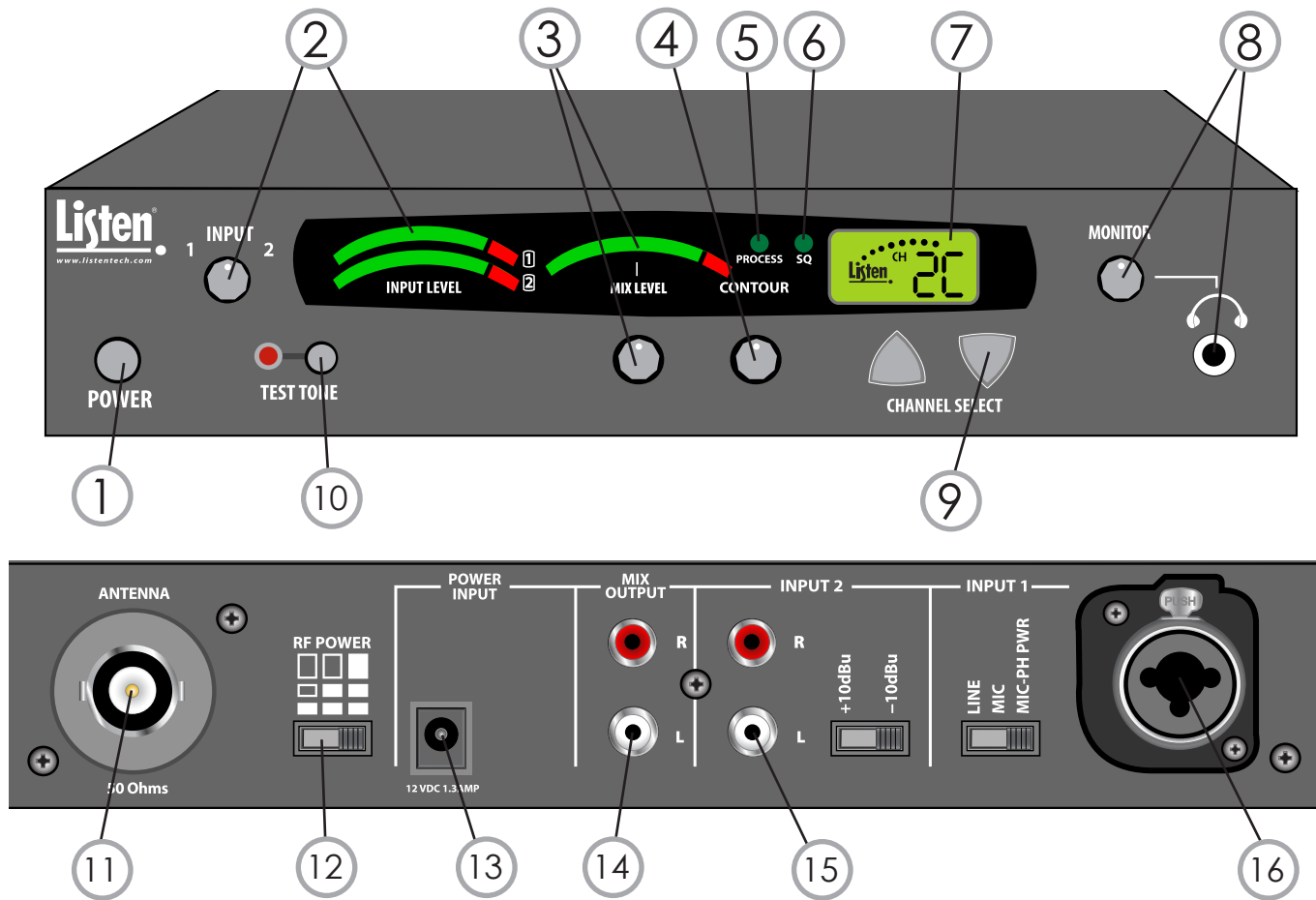
The stationary FM transmitter shall be capable of broadcasting on 57 channels. The transmitter shall have a SNR of 80 dB or greater. The output power shall be adjustable to quarter, half or full. Channel tuning shall be capable of being locked. The device shall broadcast on both wide and narrow band channels. The device shall have an audio frequency response of 50 Hz to 15k Hz,  $\pm 3$  dB at 72 MHz, or of 50 Hz to 10k Hz,  $\pm 3$  dB at 216 MHz. It shall have two mixing audio inputs. The device shall have the following audio controls: input level, mix level and an adjustable low pass filter. The device shall have an audio processor that is capable of automatic gain control and limiting. The Listen LT-800 is specified.

### LT-800-863 MHz

The Stationary FM Transmitter shall be capable of broadcasting on 17 channels. Channel tuning shall be capable of being locked. The transmitter shall have a SNR of 70 db or greater. The output power shall be adjustable to quarter, half or full. The device shall have an audio frequency response of 50 Hz to 15 kHz,  $\pm 3$ db. It shall have 2 mixing audio inputs and a mixed signal output. The device shall have the following audio controls: Input Levels, Mix Level, adjustable low pass filter (contour), headphone output (monitor). The device shall have an audio processor that is capable of automatic gain control and limiting. The Listen LT-800-863 is specified.

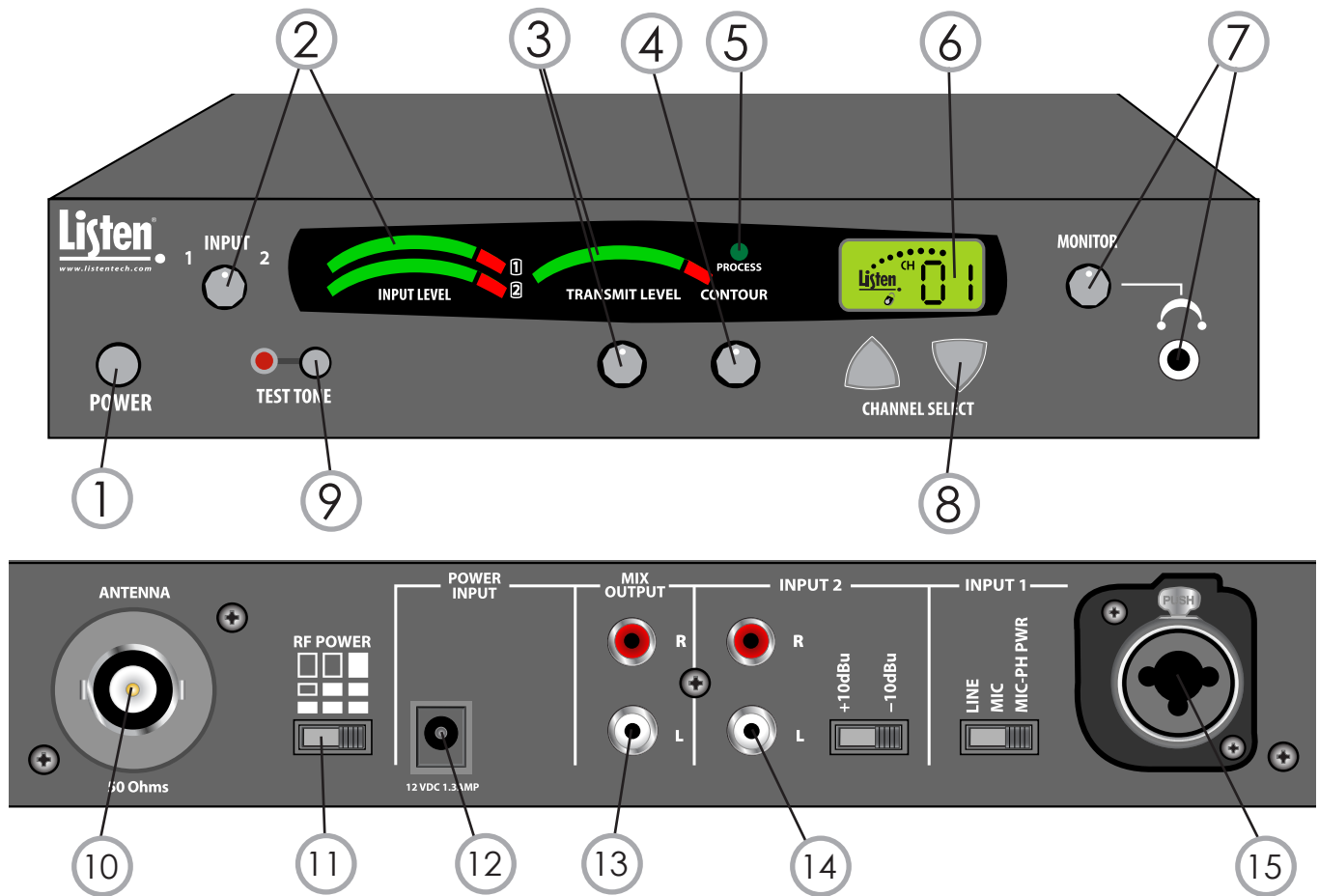
## Used With:

LR-100-072 Stationary FM Receiver/Power Amplifier (72 MHz)  
LR-100-216 Stationary FM Receiver/Power Amplifier (216 MHz)  
LR-300-072 Portable Digital FM Receiver (72 MHz)  
LR-400-072 Portable Display FM Receiver (72 MHz)  
LR-400-216 Portable Display FM Receiver (216 MHz)  
LR-400-863 Portable Display FM Receiver (863 MHz)  
LR-500-072 Portable Programmable Display FM Receiver (72 MHz)  
LR-500-216 Portable Programmable Display FM Receiver (216 MHz)  
LR-500-863 Portable Programmable Display FM Receiver (863 MHz)  
LR-600-072 Wireless FM Receiver/Speaker (72 MHz)  
LR-600-216 Wireless FM Receiver/Speaker (216 MHz)



## LT-800-072/216 MHz Product Features

1. POWER on/off on front of unit for easy access.
2. Multiple audio inputs, with input level control and dual VU meters.
3. Mix Level control sets level of mixed 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 and compression) can be turned on and off from the front panel.
6. SQ (Super Quiet Companding Technology) can be turned on and off from the front panel.
7. LCD display shows channel selected, channel lockout, programming and RF power.
8. Earphone jack and volume control to check audio integrity of transmission source.
9. UP/DOWN channel selection of 57 channels. User can easily change between Basic and Expanded modes.
10. The test tone level is adjustable, which adds flexibility when setting up and testing your system.
11. Top mount, rear mount, and remote antenna options.
12. Multiple transmitter power settings (full, ½ and ¼) with indication on LCD display.
13. In-line power supply (included) attaches here.
14. 2 phono connectors for a mixed output of Inputs 1 and 2.
15. 2 unbalanced phono audio inputs. Select either +10 dBu or -10 dBu.
16. Balanced XLR / ¼ inch audio input. Select either mic, line or mic phantom power level for input. Electret (Condenser) microphones can now be used with Input 1 phantom power.



## LT-800-863 MHz Product Features

1. POWER on/off on front of unit for easy access.
2. Multiple audio inputs, with input level control and dual VU meters.
3. Mix Level control sets level of mixed 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 and compression) can be turned on and off from the front panel.
6. LCD display shows channel selected, channel lockout, programming and RF power.
7. Earphone jack and volume control to check audio integrity of transmission source.
8. UP/DOWN channel selection of 17 channels.
9. The test tone level is adjustable, which adds flexibility when setting up and testing your system.
10. Rear mount and remote antenna options.
11. Multiple transmitter power settings (full, ½ and ¼) with indication on LCD display.
12. In-line power supply (included) attaches here.
13. 2 phono connectors for a mixed output of Inputs 1 and 2.
14. 2 unbalanced phono audio inputs. Select either +10 dBu or -10 dBu.
15. Balanced XLR / ¼ in. audio input. Select either mic, line or mic phantom power level for input. Electret (Condenser) microphones can now be used with Input 1 phantom power.

## Accessories

### Antennas



LA-124

- LA-101 Helical Top Mounted Antenna (72MHz)
- LA-102 Telescoping Top Mounted Antenna (216MHz)
- LA-106 Telescoping Top Mounted Antenna (72 MHz)
- LA-107 Ground Plane Remote Antenna (216 MHz)
- LA-116 Coaxial Dipole Remote Antenna (72MHz)
- LA-117 Coaxial Dipole Remote Antenna (216 MHz)
- LA-122 Universal Antenna Kit (72 and 216 MHz)
- LA-123 90° Helical Antenna (72 MHz)
- LA-124 90° Helical Antenna (216 MHz)
- LA-125 Antenna Kit for Rack Mount (72 MHz)
- LA-126 Antenna Kit for Rack Mount (216 MHz)
- LA-129 Right Angle Articulating Antenna (863 MHz)
- LA-130 Remote Antenna Kit (863 MHz)
- LA-131 Antenna Kit for Rack Mount (863 MHz)

### Power Supply



LA-207

- LA-201 Replacement Power Supply for LT-800/LR-100/LR-600
- LA-203 Replacement Power Supply for LA-317/LA-323
- LA-207-01 12 VDC Replacement Power Supply for LT-800 (North America)
- LA-207-02 12 VDC Replacement Power Supply for LT-800 (Asia, UK)
- LA-207-03 12 VDC Replacement Power Supply for LT-800 (Euro)

### Cables/ Connectors



LA-127

- LA-112 RG-58 50 Ohm Coaxial Cable (Per ft.)
- LA-113 RG-8 50 Ohm Low-Loss Coaxial Cable (Per ft.)
- LA-115 RG-58 BNC Coupler
- LA-121 BNC to Reverse BNC Adaptor (72MHz)
- LA-127 RG-58 BNC Connector
- LA-128 RG-8 BNC Connector
- LA-390 RG-8/50 Ohm Preassembled Coaxial Cable (Per ft.)
- LA-391 RG-58/50 Ohm Preassembled Coaxial Cable (Per ft.)

### Miscellaneous



LA-304

- LA-304 Assistive Listening Notification Signage Kit
- LA-326 Universal Rack Mounting Kit
- LA-80 2-Way RF Antenna Combiner
- LA-81 4-Way RF Antenna Combiner (72 & 216 MHz)
- LA-82 6-Way RF Antenna Combiner (72 & 216 MHz)

Specifications	LT-800-072	LT-800-216
RF Frequency Range	72.025 - 75.950 MHz	216.025 - 216.975 MHz
Number of Channels	57 (17 Wide, 40 Narrow)	57 (19 Wide, 38 Narrow)
Frequency Accuracy	+/- .005% stability 32° to 122°F (0° - 50°C)	
Transmitter Stability	50 PPM	
Output Power	80,000uV at 3 m	100mW (max allowed by FCC)
Antenna	Several available. See www.listen.tech.com for details	
Antenna Connector	Reverse BNC	BNC
Compliance	FCC Part 15, Industry Canada	

\*\* All system specifications are wireless end-to-end

Audio	System Frequency Response	50 Hz - 15 kHz (±3 dB)	50 Hz - 10 kHz (±3 dB)
	System Signal to Noise Ratio (A-Weighted)	SQ enabled; 80 dB; SQ disabled 60 dB	SQ enabled; 80 dB; SQ disabled 50 dB
	System Distortion	<2% THD at 80% deviation	
	Audio Input 1	Rear panel. Female-XLR and ¼ in. combo connector, balanced, 0/-55 dBu (line/mic) nominal input level adjustable, -30/+21 dBu (mic/line) maximum input level, impedance 20k/1k Ohms (line/mic), phantom power +12 VDC.	
	Audio Input 2	Rear panel. (2) Phono connectors, unbalanced, -10/+10 dBu nominal input level adjustable, +30 dBu maximum, impedance 100k Ohms.	
	Audio Processing (Process)	Compression can be turned on/off. Slope internally adjustable from 1:1 to 4:1. Default 2:1	
	Contour	Cuts and boosts frequencies above 5kHz	
	Combined Audio Output (Mix)	Rear panel. (2) Phono connectors, unbalanced, 0 dBu nominal output level, +19 dBu maximum, impedance 10 Ohms.	
Headphone Output (monitor)	Front pane. (1) 3.5 mm connector, unbalanced, adjustable output level, maximum, impedance 10 Ohms. 350mW, 32 Ohms, 3.5 mm stereo.		

Controls	Front Panel	Power, Test Tone on/off, Channel UP/DOWN, Input level, Mix 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
	Programming	SQ on/off, Processing on/off

Indicators	Input 1, Input 2, Mix Level VU	8 Green, 2 Red
	SQ and Processing	Indicated by a green LED when on
	RF Power	Indicated on the LCD Display
	LCD Display	Channel designation, lock status, RF Power Level, programming
	Test Tone	Red LED illuminates when test tone enabled

Power	Power Supply Type	In-line power supply. Listen part number LA-201
	Power Supply Input	120 VAC, 60 Hz, 19 Watts
	Power Supply Output	15 VAC, 1000mA
	Power Supply Connector	.02 in. (5.0 mm) OD x .01 in. (2.5 mm) ID, barrel type
	Power Supply Compliance	UL Listed

Physical	Dimensions (H x W x D)	8.50 x 1.75 x 9.12 in. (21.6 x 4.45 x 21.16 cm)
	Color	Dark grey with white silk screening
	Unit Weight	3.0 lbs. (1.4 kg)
	Unit Weight with LA-201 Power Supply	4.4 lbs. (2.0 kg)
	Shipping Weight	5.0 lbs. (2.26 kg)
	Rack Mounting	1 rack unit, optional rack mount not included. Order Listen part number LA-326.

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



Specifications		LT-800-863
RF	RF Frequency Range	863.050 - 864.950 MHz
	Number of Channels	17 Wideband
	Frequency Accuracy	+/- .005% stability 32 to 122° (0 to 50°C)
	Transmitter Stability	50 PPM
	Transmission Range	Up to 400 ft. (122m)
	Output Power	10mW ERP
	Antenna	Articulating Right Angle antenna
	Antenna Connector	BNC
Compliance	CE, ETSI, RoHS	
** All system specifications are wireless end-to-end		
Audio	System Frequency Response	50Hz - 15kHz (+/-3db)
	System Signal to Noise Ratio	70db (A-Weighted)
	System Distortion	<2% total harmonic distortion (THD) at 80% deviation
	Audio Input 1	Rear Panel. Female XLR and ¼ in. combo connector, balanced, 0/-55 dBu (line/mic) nominal input level adjustable, -30/+21 dBu (line/mic) maximum input level, impedance 20k/1k ohms (line/mic), phantom power +12VDC
	Audio Input 2	Rear Panel. (2) Phono Connectors, unbalanced, 10/+10dbu nominal input level adjustable, +30 dBu maximum, impedance 100K ohms
	Audio Processing (Process)	Compression can be turned on/off. Slope internally adjustable from 1:1 to 4:1. Default 2:1
	Contour	Cuts and boosts frequencies above 5kHz
	Combined Audio Output (Mix)	Input 1 and Input 2 Mixed Output (Rear Panel). (2) phono connectors, unbalanced, -10 dBu nominal output level, +19dbu maximum, impedance 10 ohms
Headphone Output (Monitor)	Front Panel. (One) 3.5mm stereo connector, unbalanced, adjustable output level, +7dbu maximum, impedance 10 ohms. 100mW, 32ohms	
Controls	Front Panel	Power, Test Tone on/off, Channel UP/DOWN, Input level, Mix level, Contour, Monitor, volume control
	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
	Programming	Process on/off, Channel lock
Indicators	Input 1, Input 2, Mix Level VU	Indicates Input 1, Input 2, and Mix audio levels. 10 segment LED's (8 green, 2 red)
	Processing	Indicated by a green LED when on (front panel)
	RF Power	Indicated on the LCD (low, mid, high)
	LCD Display	Channel Designation, lock status, RF power level, programming (front panel)
	Test Tone	Red LED illuminates when test tone is enabled.
Power	Power Supply Type	In line switching mode supply, Listen part number LA-207
		Input: 100-240 VAC, 47-63 Hz
		Output: 12 VDC, 1.3A
		Output Connector: .02 in (5.0mm) OD, .01 in (2.5 mm) ID, barrel type
	Power Line Cord (detachable)	Compliance: UL, CUL, PSE, TUV, CB, CE, RoHS
		North America, Type B, (LT-800-863-01)
Asia, UK, Type G, (LT-800-863-02)		
	Euro Type J, (LT-800-863-03)	
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. (5.7 kg)
	Unit Weight with LA-207-03 Power Supply Euro Line Cord	4.4 lbs. (2.0 kg)
	Shipping Weight	5.0 lbs. (2.26 kg)
	Rack Mounting	One rack space height, 1/2 rack space wide. One or two transmitters can be mounted in one rack space. Optional Rack mount (LA-326) and LA-131 antenna kit for rack mount not included.
Environmental	Temperature - Operation	14° - 104°F (-10° - 40°C)
	Temperature - Storage	-4° - 122°F (-20° - 50°C)
	Humidity	0 to 95% Relative Humidity, non condensing

## Frequently Asked Questions

**Q** Does the LT-800 include the rack mount?

**A** No, but an LA-326 Universal Rack Mounting Kit is available for purchase.

**Q** Do I need a transmitter for each audio source?

**A** Yes.

**Q** What is the range of the LT-800 transmitter?

**A** Line of site up to 1500 ft. (457 m) for 72 MHz.  
Line of site up to 3,000 ft. (914 m) for 216 MHz.  
Line of site up to 400 ft. (122 m) 863 MHz.

**Q** Is there a limit to the number of transmitters I can use in one room?

**A** Yes. The 72 MHz LT-800 has a maximum of six. The 216 MHz LT-800 has a maximum of three. The 863 MHz LT-800 has a maximum of eight.

**Q** How many receivers can I have on a system?

**A** As many as you want. The transmitter simply transmits a signal and you can have as many receivers pick that signal up as necessary. It's like a radio station transmitting and the receivers are the radios tuning into the "channel".