

# LR-100 Stationary FM Receiver/Power Amplifier Datasheet



Configuration
LR-100-072 LR-100-216

Listen's LR-100 Stationary Receiver / Power Amplifier is a stationary auditory assistance receiver with a built-in power amplifier. When used with a Listen transmitter, the LR-100 can deliver high quality audio for use in a variety of locations. The built-in 15 watt power amplifier (15 peak, 10 RMS) can be used to either amplify the receiver audio, or it can be used independently.

## Highlights

- Every Application – A choice of 72 or 216 MHz systems, complete antenna and accessory options and superb audio quality make Listen products ideal for a wide range of applications.
- Works Where Others Won't – Incorporates the latest, most advanced technology for clear transmission.
- Double the Range – 216 MHz systems offer double the range of more familiar 72 MHz systems – up to 3,000 feet (914 m).
- Superior Audio Quality – 80 dB signal-to-noise ratio, setting the industry's sound quality standard.
- Designed for installation – Rack mountable with remote antennas make installation easy and service reliable.

## Architectural Specification

The FM stationary receiver / power amplifier (receiver) shall be capable of receiving on 57 wide and narrow band channels in the frequency ranges of either 72 MHz or 216 MHz. The receiver shall be programmable to electronically lock out unneeded channels. The device shall have an adjustable squelch with an LED indication. The frequency response of the device shall be within 3 dB from 63 Hz to 15 KHz at 72 MHz, or within 3 dB from 63 Hz to 10 kHz at 216 MHz. The signal to noise ratio shall be 80 dB or greater. The device will have an integrated power amplifier capable of driving a 4 ohm speaker. The device shall be rack mountable and shall have the capability of a remote antenna. The device shall incorporate an LCD display that indicates channel and RF signal strength. The Listen LR-100 is specified.

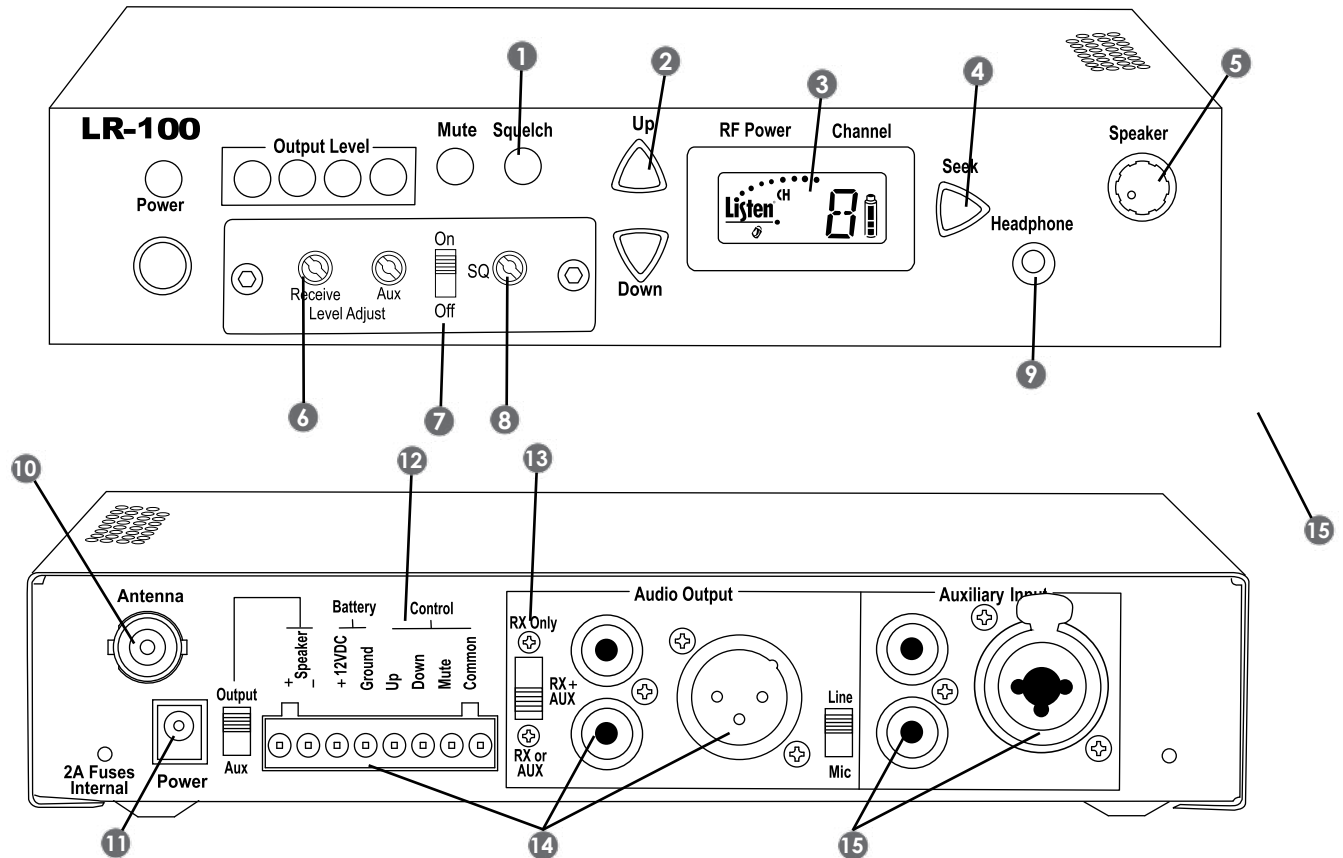
## Requires

## Includes

## Used With

- LT-800 Stationary FM Transmitter
- LT-700 Portable FM Transmitter

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## Product Features

- Adjustable Squelch and LED indicator for signal capture control (Squelch trim pot behind security cover).
- UP/DOWN channel selection of 57 channels.
- Look&Listen™ LCD Display shows channel selection and channel lock status. Also used to program channel selection (see Feature #2) so that only the channels you are using are displayed (see back cover).
- SEEK button to easily find the transmission. The LR-100 can also electronically lock on channel to prevent accidental channel switching.
- Adjustable volume control for speaker output.
- Receiver volume trim pot control behind security cover.
- Auxiliary audio input volume trim pot control behind security cover.
- When enabled, SQ™ technology provides highest audio quality available in its product category. SQ can be disabled for compatibility with other assistive listening equipment.
- Earphone jack to check audio signal integrity.
- Use 90 Degree Helical Antenna (included) or substitute remote antenna (see LR-100 Accessories) for longer range applications.
- Operates on either supplied 16VAC/1000mA power input (LA-201), or optional 12VDC battery. Trickle charge circuitry for 12VDC battery.
- External switch controller can connect to terminal block to change channels and/or mute audio.
- Selectable audio output. Select ALS received audio, received and auxiliary audio input, or "receiver or auxiliary" where auxiliary plays until an ALS signal is received, which overrides the auxiliary input.
- Three different output options: Unbalanced/phono, balanced/Male XLR, or speaker wire.
- Three different input options: ALS receiver (72 or 216 MHz, depending on model), unbalanced/phono connector, or balanced/Female-XLR ¼ inch combo connector.

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## Accessories



LA-107  
Ground Plane Remote  
Antenna (216 MHz)



LA-122  
Universal Antenna Kit  
The single solution for all of  
your indoor remote antenna  
needs. Includes: 72 and 216  
MHz components; flexible and  
rigid dipoles and monopole  
radials; hardware for multiple  
mounting configurations.



LA-125 (72 MHz)  
LA-126 (216 MHz)  
Antenna Kit for Rack Mount



LA-316  
Expansion Speaker for LR-600 and LR-100



LA-326  
Universal Rack Mounting Kit  
Includes components for single and dual rack  
configuration and a security cover



LA-327  
"L" Bracket Mounting Kit for  
LT-800/LR-100/LT-82

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	Specifications	LR-100-072	LR-100-216
RF	RF Frequency Range	72.025 - 75.975 MHz	216.025 - 216.987 MHz
	Number of Channels	57 (17 Wide, 40 Narrow)	57 (19 Wide, 38 Narrow)
	Sensitivity	.6uV typical, 1uV maximum for 12 dB SINAD	
	Frequency Accuracy	+/- .005% stability 32° to 122°F (0° - 50°C)	
	Antenna	Several available. See www.listen.com for details	
	Optional Antennas	RF-58 or RG-8 coaxial cable. See www.listen.com for details	
	Antenna Connector	Reverse BNC	BNC
	Squelch	Continuously adjustable via front panel trim pot	
Compliance	FCC Part 15, Industry Canada		

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

Audio	System Frequency Response	63 Hz - 15 kHz (±3 dB)	63 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% total harmonic distortion (THD) at 80% deviation	
	Auxillary Input to Output	Frequency Response: 25 Hz to 20 kHz (±3 dB), SNR: > 80 dB, Distortion: < 0.2%	
	Balanced Auxillary Input	Rear panel. One female XLR - ¼ in. combo connector, balanced, 0 dBu nominal input level adjustable, +13 dBu maximum, impedance 600 Ohms.	
	Unbalanced Auxillary Input	Rear panel. Two phono connectors, unbalanced, -10 dBu nominal input level adjustable, +7 dBu maximum, impedance 10k Ohms.	
	Balanced Output	Rear panel. One male XLR, balanced, 0 dBu nominal output level, +16 dBu maximum, impedance 2k/10 Ohms (line/mic).	
	Unbalanced Output	Rear panel. Two phono connectors, unbalanced, -10 dBu nominal output level, +2 dBu maximum, impedance 2k Ohms.	
	Headphone Output	Front panel. One 3.5 mm stereo connector, unbalanced, adjustable output level, +16 dBu maximum, impedance 32 Ohms, 120mW.	
	Speaker Output	Rear panel, one detachable terminal block, bridged, adjustable output level, 15/10 Watts (peak/RMS) continuous power with 4 Ohm load.	

Controls	Front Panel	Receive level, auxillary input level, SQ on/off squelch.
	Rear Panel	Audio output select (RX only, RX + AUX, RX or AUX), Speaker (Output, AUX), switchable balanced output level.
	User Controls	Volume, channel UP/DOWN, SEEK (all controls except volume are lockable).
	Remote Controls	Eight position detachable terminal block, channel up, channel down, mute.
	Programming	Unit can be programmed so that only desired channels are displayed to the user, channel selection can be locked by holding the SEEK button for 5 seconds.

Indicators	VU Meter	Four LED (three green, one red)
	Power	Green LED illuminates when the unit is powered up.
	LCD Display	Channel designation, lock status, RF Power Level, programming
	Squelch	Green LED illuminates when the unit is squelched.
	Mute	Green LED illuminates when the output audio is muted.

Power	Power Supply Type	In-line power supply. Listen part number LA-201
	Power Supply Input	120 VAC, 60 Hz, 19 Watts (maximum continuous)
	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
	Optional Battery	12 VDC, connected via terminal block
Optional Battery Charging	Trickle charge of optional 12 VDC battery through terminal clock connection.	

Physical	Dimensions (W x H x D)	8.50 x 1.75 x 9.12 in. (21.6 x 4.45 x 21.16 cm)
	Unit Weight	3.0 lbs. (1.4 kg)
	Unit Weight with LA-201 Power Supply	4.4 lbs. (2.0 kg)
	Shipping Weight	5.6 lbs. (2.5 kg)
	Rack Mounting	½ rack unit (RU), 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

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