# LT-700 Portable FM Display Transmitter







# **Highlights**

- •Superior Audio Quality 80 dB (70 dB with 863 MHz) signal-to-noise ratio (SNR), setting the industry's sound quality standard.
- 57 channels (17 channels with 863 MHz).
- Look & Listen™ LCD shows channel, battery status, signal strength and programming information.
- 100 % Digital Listen receivers are digitally-tuned so transmission won't drift.
- Programmability- Uneeded channels can be locked so this receiver will access only one or more channels of your choice.
- Uses standard alkaline or nickel-metal hydride (NiMH) batteries.
- Built in SmartCharge™ won't allow batteries to overcharge. Charging circuitry is conveniently built into Listen's LT-700.
- Drop in charging contacts for any of Listen's many charging cases or a charging plug on the side of the unit.
- Mute switch.
- •Mic and/or line level inputs.
- Many accessory options make Listen products ideal for a wide range of applications
- Limited Lifetime Warranty with hassle-free support.

# **Used With:**

LR-100-072 Stationary FM Receiver/Power Amplifier (72 MHz)

LR-100-216 Stationary FM Receiver/Power Amplifier (216 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)

#### Includes:

LT-700 Portable Display FM Receiver Owner's manual (72 MHz & 216 MHz) Quick reference card (863 MHz) Limited Lifetime Warranty Program Card (863 MHz) FM System Design Guide and Manual Card (863 MHz)

# Don't miss a single sound.



The Listen LT-700 Portable Transmitter will broadcast your presenters or interpreters voice to everyone in the audience, without having to carry a microphone or be

# Configuration

LT-700-072 LT-700-216 LT-700-863

plugged into the wall. Excellent for factory tours, outdoor events, wireless microphone applications, classrooms, training sessions, or personal use – anywhere you need to amplify sound but don't have (or want) an installed sound system. Portable transmission has never been easier for users!

# **Architectural Specifications**

#### LT-700-072/216

The portable FM transmitter shall be capable of broadcasting on 57 wide and narrow band channels. The transmitter shall have a SNR of 80 db or greater. The unit shall incorporate a microphone sensitivity switch. Channel tuning shall be capable of being locked. The device shall have an audio frequency response of 50 Hz to 15 KHz (±3 dB) at 72 MHz or of 50 Hz to 10 kHz (±3 dB) at 216 MHz. The device will incorporate a mute switch. The battery door shall be capable of being mechanically locked. The device shall incorporate an LCD display that indicates channel, programming, battery level, low battery, battery charging, RF signal strength and channel lock status. The unit shall operate off of two (2) AA batteries; alkaline or NiMH. The transmitter shall incorporate automatic battery charging circuitry for recharging of NiMH batteries. The device shall have a switchable option for the use of alkaline or NiMH batteries. The Listen LT-700-072 or LT-700-216 is specified.

#### LT-700-863

The portable FM Transmitter shall be capable of broadcasting on 17 wide band channels. The transmitter shall have a SNR of 70 db or greater. The unit shall incorporate a microphone sensitivity switch. Channel tuning shall be capable of being locked. 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 (±3 dB). The device shall incorporate a mute switch. The battery door shall be capable of being mechanically locked. The device shall incorporate an LCD display that indicates channel, programming, battery level, low battery, battery charging, RF signal strength and channel lock status. The unit shall operate off of two (2) AA batteries; alkaline or NiMH. The transmitter shall incorporate automatic battery charging circuitry for recharging of NiMH batteries. The device shall have a switchable option for the use of alkaline or NiMH batteries. The Listen LT-700-863 is specified.

# Requires:

#### Requires a microphone and (2) AA batteries

LA-261 Lavalier Microphone

LA-262 Over-the-Head Microphone

LA-270 Noise Canceling Microphone (72 MHz & 216 MHz only)

LA-272 Over-the-Head Microphone w/Earphone

LA-274 Hand Held Microphone

LA-276 Collar Microphone

LA-277 Conference Microphone

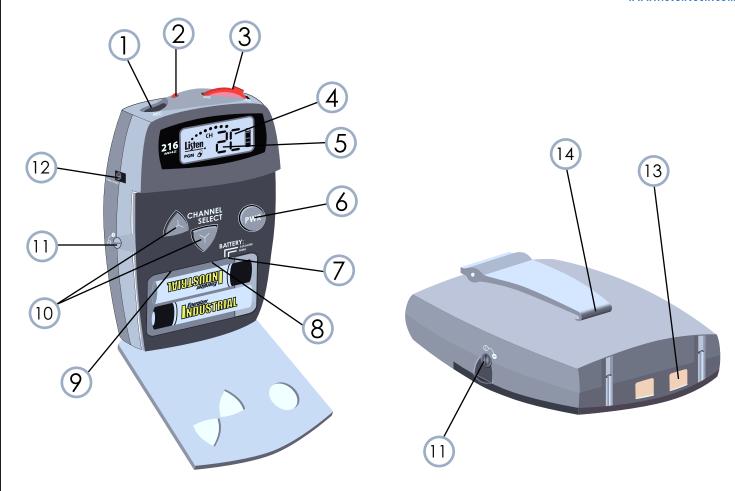
LA-278 Behind-the-Head Microphone

LA-279 Over-the-Ear Microphone - Presentation Style (72 MHz & 216 MHz only)

LA-361 High Capacity AA Alkaline Batteries (2)

LA-362 Rechargeable AA NiMH Batteries (2)

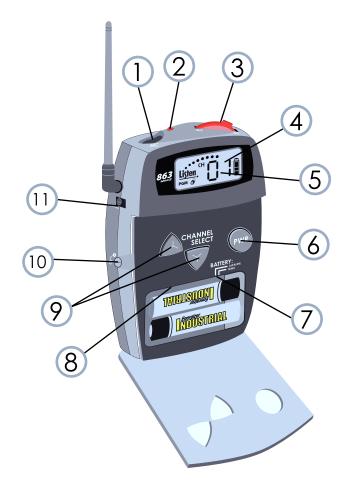


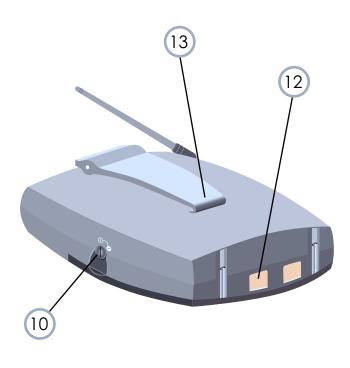


# Product Features (LT-700-072 and LT-700-216)

- 1. A microphone or line level source (such as a CD or MP3 player) connects here. Use the LA-263 Line/Microphone "Y" Cable (72 MHz and 216 MHz) to connect an audio device with your microphone. Transmitter antenna is built into the microphone cord, eliminating additional wires while maximizing transmission effectiveness.
- 2. Multifunction LED indicates when power is on, microphone is muted, if batteries are low, and charging status.
- 3. Easy access mute switch.
- 4. Look&Listen™ LCD Display shows channel selection, channel lock, and battery level.
- 5. Offers 57 channels, or can be programmed so that only the channels you are using are displayed.
- 6. Easy access POWER button.
- 7. Uses two (2) AA batteries. Adjustable to use either alkaline or NiMH batteries
- 8. When enabled, SQ technology provides the highest audio quality available in its product category. SQ can be disabled for compatibility with other assistive listening or tour group equipment.
- 9. Adjustable microphone sensitivity switch for best audio results.
- 10. UP/DOWN channel selection. Also used to lock and unlock channel selection to prevent accidental channel switching.
- 11. Manually lockable battery compartment door.
- 12. Single transformer charging plug port.
- 13. Contact points for Listen's drop in charging cases.
- 14. Exclusive belt clip "loop" prevents unit from slipping off belt or strap.







# **Product Features (LT-700-863)**

- 1. A microphone or line level source (such as a CD or MP3 player) connects here. Transmitter antenna is built into the microphone cord, eliminating additional wires while maximizing transmission effectiveness.
- 2. Multifunction LED indicates when microphone is muted, if batteries are low, if the transmitter is locked on a channel and charging status.
- 3. Easy access mute switch.
- 4. Look&Listen<sup>TM</sup> LCD Display shows channel selection, channel lock, and battery level.
- 5. Offers 17 channels, or can be programmed so that only the channels you are using are displayed.
- 6. Easy access POWER button.
- 7. Uses two (2) AA batteries. Adjustable to use either alkaline or NiMH batteries.
- 8. Adjustable microphone sensitivity switch for best audio results.
- 9. UP/DOWN channel selection. Also used to lock and unlock channel selection to prevent accidental channel switching.
- 10. Manually lockable battery compartment door.
- 11. Single transformer charging plug port.
- 12. Contact points for Listen's drop in charging cases.
- 13. Exclusive belt clip "loop" prevents unit from slipping off belt or strap.



## Accessories



# **Microphones**

LA-261 Lavalier Microphone

LA-262 Over-the-Head Microphone

LA-270 Noise Canceling Microphone (72 MHz & 216 MHz only)

LA-272 Over-the-Head Microphone w/Earphone

LA-274 Hand Held Microphone

LA-276 Collar Microphone

LA-277 Conference Microphone

LA-278 Behind-the-Head Microphone

LA-279 Over-the-Ear Microphone - Presentation Style (72 MHz & 216 MHz only)



LA-278

#### Cables

LA-263 Line/Mic Y Input Cable for LT-700 (72 MHz and 216 MHz only) LA-275 Portable Unit Sacrificial Cable



# **Charging/Carrying Cases**

LA-311-01 16-Unit Portable FM Product Charging/Carrying Case (North America)

LA-311-02 16-Unit Portable FM Product Charging/Carrying Case (Asia/UK)

LA-311-03 16-Unit Portable FM Product Charging/Carrying Case (Europe)

LA-317-01 4-Unit Portable FM Product Charging/Carrying Case (North American)

LA-317-02 4-Unit Portable FM Product Charging/Carrying Case (Asia/UK)

LA-317-03 4-Unit Portable FM Product Charging/Carrying Case (Europe)

LA-321-01 8-Unit Portable FM Product Charging/Carrying Case (North America)

LA-321-02 8-Unit Portable FM Product Charging/Carrying Case (Asia/UK)

LA-321-03 8-Unit Portable FM Product Charging/Carrying Case (Europe)



Charging/Carrying Cases with Removable Lid

LA-323-01 4-Unit Portable FM Product Charging/Carrying Case (North America) LA-323-02 4-Unit Portable FM Product Charging/Carrying Case (Asia/UK)

LA-323-03 4-Unit Portable FM Product Charging/Carrying Case (Europe)

LA-324-01 8-Unit Portable FM Product Charging/Carrying Case (North America)

LA-324-02 8-Unit Portable FM Product Charging/Carrying Case (Asia/UK)

LA-324-03 8-Unit Portable FM Product Charging/Carrying Case (Europe)

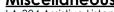
LA-325-01 16-Unit Portable FM Product Charging/Carrying Case (North America)

LA-325-02 16-Unit Portable FM Product Charging/Carrying Case (Asia/UK)

LA-325-03 16-Unit Portable FM Product Charging/Carrying Case (Europe)

LA-324

# **Miscellaneous**





LA-306 Soft Case LA-319 Protective Pouch for Portable FM Products

LA-320 Configurable Carrying Case

LA-330 Portable Unit Lanyard

LA-361 High Capacity AA Alkaline Batteries (2)

LA-362 Rechargeable AA NiMH Batteries (2)

LA-202 Power/ Charging Supply for FM Portable Products (72MHz & 216 MHz only)

LA-361

NDUSTRIA

INDUSTRIAL-



# Specifications LT-700-072/216

	Specifications	LT-700-072	LT-700-216	
	RF Frequency Range	72.025 - 75.950 MHz	216.0125 - 216.9875 MHz	
RF	Number of Channels	17 wide band, 40 narrow band	19 wide band, 38 narrow band	
	Frequency Accuracy	± .005% stability 32 to 1	22 °F (0 to 50 °C)	
	Transmitter Stability	50 PPM		
	Transmitter Range	From 0 to 50 ft. (15.2 m) to 150 ft. (45.7 m)		
	Output Power	Less than 10 mW (72 MHz)	Less than 100 mW (216 MHz)	
	Antenna	Microphone cable		
	Compliance	FCC Part 15, Part 90, Industry Canada, RoHS		
		** All system specifications are wireless end-to-end		
	System Frequency	50 Hz 15 kHz (+2 dP) 70 MHz	50 Hz 10 kHz (±2 dP) 214 MHz	
	Response	50 Hz - 15 kHz (±3 dB) 72 MHz	50 Hz - 10 kHz (±3 dB) 216 MHz	
	System Signal to Noise Ratio	SQ enabled; 80 dB; SQ disabled 60 dB		
	System Distortion	<2% total harmonic distortion (THD) at 80% deviation		
Audio	Microphone Input	Unbalanced, ring of 3.5mm connector, (-10dB nominal input level adjustable, +4dbu maximum, impedence 10k Ohms)		
	Microphone Sensitivity	Three position switch: high, mid	ddle, and low; 6 dB increments	
	Line Input	Unbalanced, ring of 3.5 mm (0.14 in.) connector, -10 dBu nominal, impedance 10k ohm		
	Microphone Power	3 VD0	C Bias	
		-		
	User Controls	Power, mute, ch	annel UP/DOWN	
Controls	Set-up Controls (battery compartment)	Mic sensitivity, NiMH/alkaline battery, SQ enable/disable		
	Programming	Channel Lockout, Channel lock		
	LED	Red, illuminated when unit is on. Flashes when batteries are low, or to indicate charging. Flashes when muted.		
Indicators	Display	Channel designation, programming, battery level, battery charging, RF signal strength and channel lock		
	1			
	Battery Type	Two (2 ) AA batteri	es, Alkaline or NiMH	
	Battery Type Battery Life (Listen batteries)	Two (2 ) AA batterio 15 hours alkaline (LA-361), 8 hou		
	1 11	15 hours alkaline (LA-361), 8 hours alkaline (LA-361), 8 hours	urs NiMH rechargeable (LA-362) atic, 13 hours	
Power	Battery Life (Listen batteries)	15 hours alkaline (LA-361), 8 hou	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case	
Power	Battery Life (Listen batteries) Battery Charging (NiMH only)	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case included (LA-202) e connector. 7.5 VDC, center positive <25	
Power	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case included (LA-202) e connector. 7.5 VDC, center positive <25	
Power	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply Power Supply Connector	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case included (LA-202) e connector, 7.5 VDC, center positive <25 use with Listen charging cases.	
Power	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply Power Supply Connector	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case included (LA-202) connector, 7.5 VDC, center positive <25 use with Listen charging cases. CUL, TUV, CB compliant	
Power	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply Power Supply Connector Power Supply Compliance	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case included (LA-202) connector, 7.5 VDC, center positive <25 use with Listen charging cases. CUL, TUV, CB compliant	
	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply Power Supply Connector Power Supply Compliance  Dimensions (H x W x D)	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case included (LA-202) connector. 7.5 VDC, center positive <25 use with Listen charging cases. CUL, TUV, CB compliant  0.8 x 7.0 x 3.8 cm) hite silk screening	
Power	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply Power Supply Connector Power Supply Compliance  Dimensions (H x W x D) Color	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case included (LA-202) e connector, 7.5 VDC, center positive <25 use with Listen charging cases. CUL, TUV, CB compliant  0.8 x 7.0 x 3.8 cm) hite silk screening (111 g)	
	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply Power Supply Connector Power Supply Compliance  Dimensions (H x W x D) Color Unit Weight	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case included (LA-202) e connector, 7.5 VDC, center positive <25 use with Listen charging cases. CUL, TUV, CB compliant  0.8 x 7.0 x 3.8 cm) hite silk screening (111 g) (164 g)	
	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply Power Supply Connector Power Supply Compliance  Dimensions (H x W x D) Color Unit Weight Unit Weight with batteries	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case included (LA-202) connector, 7.5 VDC, center positive <25 use with Listen charging cases.  CUL, TUV, CB compliant  0.8 x 7.0 x 3.8 cm) hite silk screening (111 g) (164 g) (453 g)	
	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply Power Supply Connector Power Supply Compliance  Dimensions (H x W x D) Color Unit Weight Unit Weight with batteries Shipping Weight	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case included (LA-202) c connector, 7.5 VDC, center positive <25 use with Listen charging cases.  CUL, TUV, CB compliant  0.8 x 7.0 x 3.8 cm) hite silk screening (111 g) (164 g) (453 g)	
	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply Power Supply Connector Power Supply Compliance  Dimensions (H x W x D) Color Unit Weight Unit Weight with batteries Shipping Weight Door	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362) atic, 13 hours contact points for use with charging case included (LA-202) e connector, 7.5 VDC, center positive <25 use with Listen charging cases. CUL, TUV, CB compliant  0.8 x 7.0 x 3.8 cm) hite silk screening (111 g) (164 g) (453 g) Is accessible through doors	
Physical	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply Power Supply Connector Power Supply Compliance  Dimensions (H x W x D) Color Unit Weight Unit Weight with batteries Shipping Weight Door  Temperature - Operation	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362)  atic, 13 hours  contact points for use with charging case included (LA-202)  e connector. 7.5 VDC, center positive <25 use with Listen charging cases.  CUL, TUV, CB compliant  0.8 x 7.0 x 3.8 cm)  hite silk screening  (111 g)  (164 g)  (453 g)  s accessible through doors  (-10° to 40° C)	
	Battery Life (Listen batteries) Battery Charging (NiMH only) Power Supply Power Supply Connector Power Supply Compliance  Dimensions (H x W x D) Color Unit Weight Unit Weight with batteries Shipping Weight Door	15 hours alkaline (LA-361), 8 hours alkaline (LA	urs NiMH rechargeable (LA-362)  atic, 13 hours  contact points for use with charging case; included (LA-202)  e connector, 7.5 VDC, center positive <25 use with Listen charging cases.  CUL, TUV, CB compliant  0.8 x 7.0 x 3.8 cm) hite silk screening  (111 g)  (164 g)  (453 g)  s accessible through doors  (-10° to 40° C)  -20 to 50° C)	

	Specifications	LT-700-863	
	RF Frequency Range	863.050 - 864.950 MHz	
	Number of Channels	17 Wideband	
	Frequency Accuracy	+/005% stability 32 to 122° (0- 50°C)	
	Transmitter Stability	50 PPM	
RF	Transmission Range	0 m (0 ft.) to 76.2 m (250 ft.)	
	Output Power	10mW maximum (adjustable)	
	Antenna	Integrated external antenna	
	Compliance	CE, ETSI, RoHS	
		** All system specifications are wireless end to end **	
	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	Microphone Input	Unbalanced, tip of 3.5 mm (0.14 in.) connector, -20 dBu nominal, impedance 21k ohm	
	Microphone Sensitivity	Three position switch: high, middle, and low; 6 dB increments	
	Line Input	Unbalanced, ring of 3.5 mm (0.14 in.) connector, -10 dBu nominal, impedance 10k ohm	
	Microphone power	3VDC Bias	
	User Controls	Power, mute, channel up/down	
Controls	Set-up Controls (battery compartment)	Mic sensitivity, NiMH/alkaline battery	
	Programming	Channel lock out, Channel lock	
Indicators	LED	Red, illuminated when unit is on. Flashes when batteries are low, or to indicate charging. Flashes when muted.	
indicators	Display	Channel Designation, lock status, signal strength indication, battery life, RF power	
	Battery Type	Two (2) AA batteries, Alkaline or NiMH	
Power	Battery Life (Listen batteries)	10 hours alkaline (LA-361), 6 hours NiMH rechargeable (LA-362)	
, 6, , 6,	Battery Charging (NiMH only)	Fully Automatic, 13 hours	
	Dimensions (H x W x D)	10.8 x 7.0 x 3.8 cm (4.25 x 2.75 x 1.50 in.)	
	Color	Dark Grey with white silk screening	
	Unit Weight	111 g (3.9 oz)	
Physical	Unit Weight with batteries	164 g (5.8 oz)	
	Shipping Weight	453 g (1 lbs,)	
	Door	Manually Lockable. Up, down, and power buttons through door. Other controls behind door	
-			
	Temperature - Operation	-10 to 40 °C (14 to 104 °F)	
Environmental	Temperature - Storage	-20 to 50 °C (-4 to 122 °F)	
	Humidity	0 to 95% Relative humidity, non condensing	

<sup>\*\*</sup>Specifications are subject to change without notification

# **Frequently Asked Questions**

# LR-500 Portable Programmable FM Display Receiver







LR-500-072 LR-500-216 LR-500-863

One of Listen's most sophisticated receivers, the LR-500 Programmable Display Receiver offers the signature Look&ListenTM LCD Display that shows programming status, channel, lock, battery level, and RF signal strength. Channel selector buttons are easily accessible on the front of the unit. It has channel SEEK capability and is compatible with mono or stereo headsets. It takes AA batteries (alkaline or NiMH rechargeable). SmartChargeTM capabilities prevent overcharging. It's easy to use, easy to program.



# **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.
- Programmability Unneeded channels can be locked so this receiver will access only one or more channels of your choice.
- 100 % Digital Listen receivers are digitally-tuned so transmission won't drift; assurance that when you select a channel, it stays on the channel.
- •Uses standard alkaline or NiMH batteries.
- Built in SmartCharge<sup>™</sup> won't allow batteries to overcharge.
   Charging circuitry is conveniently built into Listen's receivers;
   never worry about unplugging a transformer at a certain time.
- •Transformer charging plug or for the ultimate convenience drop in charging contacts.
- •Limited Lifetime Warranty with hassle-free support.

# Requires:

LA-361 - High Capacity AA Alkaline Batteries (2) LA-362 - Rechargeable AA NiMH Batteries (2)

# **Used With:**

LT-800 Stationary FM Transmitter

LT-700 Portable FM Display Transmitter

LA-161 Single Ear Bud

LA-162 Stereo Ear Bud

LA-164 Ear Speaker

LA-165 Stereo Headphones

LA-166 Neck Loop

LA-170 Behind-the-Head Stereo Headphones

# **Architectural Specification**

#### LR-500-072/216

The FM receiver shall be capable of receiving on 57 wide and narrow band channels. The receiver shall have a SNR of 80 dB or greater. The receiver shall be programmable to electronically lock out unneeded channels. The receiver shall be capable of seeking channels. The device shall have a squelch. The device shall have an audio frequency response of 50 Hz to 15 KHz, ± 3 dB at 72 MHz and 50 - 10 kHz (±3dB) at 216 MHz. The device shall incorporate a stereo headset jack that allows the user to plug in either a mono or stereo headset and listen to audio normally. The device shall incorporate an LCD display that indicates channel, battery level, low battery, battery charging, RF signal strength and channel lock status. The receiver shall incorporate automatic battery charging circuitry for recharging of NiMH batteries. The device shall have a switch able option for the use of (2) alkaline or (2) NiMH batteries. The Listen LR-500-072 or LR-500-216 is specified.

#### LR-500-863

The FM receiver shall be capable of receiving on 17 wide band channels with a SNR of 70dB or greater. The receiver shall be programmable to electronically lock out unneeded channels. The receiver shall be capable of seeking channels. The device shall be able to be locked on a single channel. The device shall have an adjustable squelch. The device shall have an audio frequency response of 50 Hz to 15 KHz, ±3 dB. The device will incorporate a stereo headset jack that allows the user to plug in either a mono or stereo headset. The device shall incorporate an LCD display that indicates channel, battery level, low battery, battery charging, and RF signal strength. The receiver shall be able to function in both DX and Local mode. The unit shall operate off of 2 AA batteries. The receiver shall incorporate automatic battery charging circuitry for recharging of NiMH batteries. The Listen LR-500-863 is specified.

## Includes:

LR-500 Portable Programmable Display FM Receiver

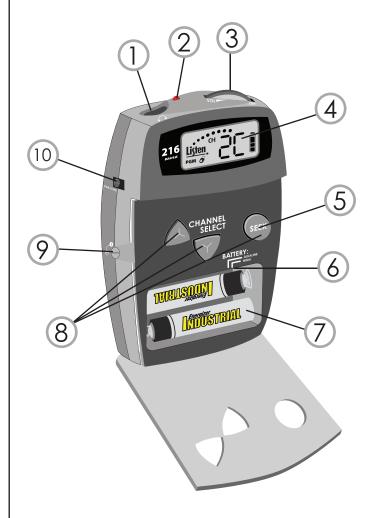
Owner's manual (72 MHz & 216 MHz)

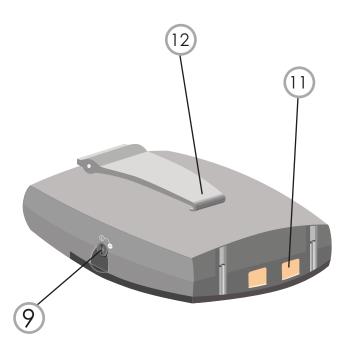
Quick Reference Card (863 MHz)

Limited Lifetime Warranty Program Card (863 MHz)

FM System Design Guide and Manual Card (863 MHz)



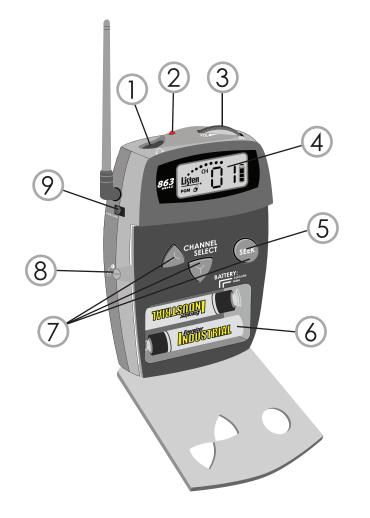


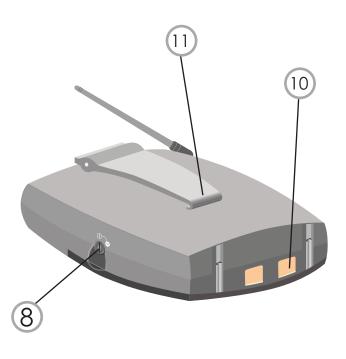


# Product Features LR-500-072/216

- 1. An earphone jack (3.5 mm) that accepts either mono or stereo headsets. Receiver antenna is built into the earphone cord, eliminating additional wires while maximizing receiver effectiveness.
- 2. Multifunction LED indicates power on, if batteries are low, if the unit is locked on a channel when SEEK is pressed and charging status.
- 3. Easy on/off volume control.
- 4. Look&Listen™ LCD Display shows channel selection, channel lock and battery level.
- 5. Seeks to find best available broadcast. Also, used to adjust squelch in 20 steps which mutes audio on loss of RF signal.
- 6. When enabled, SQ provides highest audio quality available in its product category. SQ can be disabled for compatibility with other assistive listening equipment.
- 7. Uses two AA batteries. Selectable to use either alkaline or Listen's advanced NiMH Rechargeable AA Batteries. SmartCharge™ incorporated into receiver makes sure each unit receives the most beneficial charge.
- 8. Digitally tuned with UP, DOWN, and SEEK buttons behind manually lockable door. Electronically lock on channel by holding the SEEK button down 5 seconds to prevent tampering.
- 9. Manually lockable battery compartment door.
- 10. Charging plug port.
- 11. Contact points for Listen's drop in charging cases.
- 12. Exclusive belt clip "loop" prevents unit from slipping off belt or strap.







# Product Features LR-500-863

- 1. An earphone jack (3.5 mm) accepts either mono or stereo headsets. Receiver antenna is built into the earphone cord, eliminating additional wires while maximizing receiver effectiveness.
- 2. Multifunction LED indicates power on, if batteries are low, if the unit is locked on a channel when SEEK is pressed and charging status.
- 3. Easy on/off volume control.
- 4. Look&Listen™ LCD Display shows channel selection, channel lock and battery level.
- 5. Seeks to find best available broadcast. Also used to adjustable squelch in 20 steps mutes audio on loss of RF signal.
- 6. Uses two AA batteries. Selectable to use either alkaline or Listen's advanced NiMH rechargeable AA batteries. SmartCharge™ incorporated into receiver makes sure each unit receives the most beneficial charge.
- 7. Digitally tuned with UP, DOWN, and SEEK buttons behind manually lockable door. Electronically lock on channel by holding the SEEK button down 5 seconds to prevent tampering.
- 8. Manually lockable battery compartment door.
- 9. Charging plug port.
- 10. Contact points for Listen's drop in charging cases.
- 11. Exclusive belt clip "loop" prevents unit from slipping off belt or strap.



# **Accessories**



# **Power/Charging Supply**

LA-202 Power/Charging Supply for FM Portable Products
LA-208-01 7.5 VDC Power/Charging Supply for FM Portable Products (North America)
LA-208-02 7.5 VDC Power/Charging Supply for FM Portable Products (Asia, UK)
LA-208-03 7.5 VDC Power/Charging Supply for FM Portable Products (Euro)



# Cables

LA-265 Consumer Camcorder Cable LA-266 Professional Camcorder Cable LA-275 Sacrificial Cable



# **Charging/Carrying Cases**

LA-311-01 16-Unit Portable FM Product Charging/Carrying Case (North America)
LA-311-02 16-Unit Portable FM Product Charging/Carrying Case (Asia, UK)
LA-311-03 16-Unit Portable FM Product Charging/Carrying Case (Euro)
LA-317-01 4-Unit Portable FM Product Charging/Carrying Case (North America)
LA-317-02 4-Unit Portable FM Product Charging/Carrying Case (Asia, UK)
LA-317-03 4-Unit Portable FM Product Charging/Carrying Case (Euro)
LA-321-01 8-Unit Portable FM Product Charging/Carrying Case (North America)
LA-321-02 8-Unit Portable FM Product Charging/Carrying Case (Asia, UK)
LA-321-03 8-Unit Portable FM Product Charging/Carrying Case (Euro)



# Charging/ Carrying Cases with Removable Lid

LA-323-01 4-Unit Portable FM Product Charging/Carrying Case w/Removable Lid (N. America) LA-323-02 4-Unit Portable FM Product Charging/Carrying Case w/Removable Lid (Asia, UK) LA-323-03 4-Unit Portable FM Product Charging/Carrying Case w/Removable Lid (Euro) LA-324-01 8-Unit Portable FM Product Charging/Carrying Case w/Removable Lid (N. America) LA-324-02 8-Unit Portable FM Product Charging/Carrying Case w/Removable Lid (Asia, UK) LA-324-03 8-Unit Portable FM Product Charging/Carrying Case w/Removable Lid (Euro) LA-325-01 16-Unit Portable FM Product Charging/Carrying Case w/Removable Lid (N. America) LA-325-02 16-Unit Portable FM Product Charging/Carrying Case w/Removable Lid (Asia, UK) LA-325-03 16-Unit Portable FM Product Charging/Carrying Case w/Removable Lid (Euro)





### Miscellaneous

LA-306 Soft Case (72 MHz & 216 MHz only)
LA-319 Protective Pouch for Portable FM Products
LA-320 Configurable Carrying Case
LA-330 Portable Unit Lanyard

	Specifications	LR-500-072	LR-500-216	
	RF Frequency Range	72.025 - 75.950 MHz	216.0125 - 216.9875 MHz	
	Number of Channels	17 wide band, 40 narrow band	19 wide band, 38 narrow band	
	Sensitivity	.6 uV typical, 1 uV maxii		
RF	Frequency Accuracy	+/005% stability 32° to 122°F (0° - 50°C)		
	Antenna	Uses earphone cable		
	Squelch	Programmable in 20 steps, automatic on loss of RF signal		
	Compliance	FCC Part 15, Industry Canada	FCC Part 90, Industry Canada	
	•	** All system specifications are wireless end		
	System Frequency Response	50 Hz - 15 kHz (+/-3db) 72 MHz	50 - 10 kHz (+/-3db) 216 MHz	
A 19	System Signal to Noise Ratio (A-Weighted)	SQ enabled: 80dB; SQ disabled 60dB		
Audio	System Distortion	<2% total harmonic distortion	n (THD) at 80% deviation	
	Output	3.5 mm connectors, unbalanced, 0dBu nominal output level, 16 mW maximum, impedance 32 Ohms		
	User Controls	Channel up/down, SEEK, volume		
Controls	Set up Controls (battery compartment)	Alkaline/NiMH batteries, SQ enable/disable		
	Programming	Channel lock, squelch,	Channel Lock Out	
Indicators	LED	Red, illuminated when unit is on. Flashes v charging, Flashes when loc		
	Display	Channel Designation, lock status, signal strength indication, Programming		
	Battery Type	Two AA batteries, o	ılkaline or NiMH	
	Battery Life (Listen Batteries)	30 hours alkaline (LA-361), 15 hour		
	Battery Charging (NiMH only)	Fully automatic		
Power	Power Supply	I/P 120VAC; O/P 7.5VDC 250 mA; Drop in contact points for use with charging cases. Power supply not included (LA-202)		
	Power Supply Connector	2.3 mm OD by 0.7 mm ID, barrel type connector, 7.5 VDC, center positive <250 mA. Drop in contact points for use with Listen charging/carrying cases.		
	Power Supply Compliance	RoHS, WEEE, UL, PSE, CE, CUL, TUV, CB compliant		
	Dimensions (H x W x D)	5.0 x 3.0 x 1.0 in. (13.	0 x 7.6 x 2.5 cm)	
	Color	Dark Grey with whit	e silk screening	
Physical	Unit Weight	3.9 oz. (1	11 g)	
	Unit Weight with batteries	5.8 oz. (164 g)		
	Shipping Weight	1.0 lb. (0.4	45 kg)	
	Door	Manually lockable. UP, DOWN, and SEEK through door, other controls behind door (see Controls above)		
	Temperature - Operation	,	14° to 104°F (-10° to 40°C)	
Environmental	Temperature - Storage	-4° to 122°F (-20	·	
	Humidity	0 to 95% relative humidity, non-condensing		

\*\*Specifications are subject to change without notification



	Specifications	LR-500-863	
	RF Frequency Range	863.050 - 864.950 MHz	
	Number of Channels	17 Wideband	
	Sensitivity	.6uV typical, 1 uV maximum for 12 dB sinad	
RF	Frequency Accuracy	+/005% stability 32 to 122°F (0-50°C)	
	Antenna	Integrated External Antenna	
	Squelch	Programmable in 20 steps, automatic on loss of RF signal	
	Compliance	CE, ETSI, ROHS	
		** All system specifications are wireless end to end **	
	System Frequency Response	50Hz - 15kHz (+/-3db)	
	System Signal to Noise Ratio	70db (A-Weighted)	
Audio	System Distortion	<2% total harmonic distortion (THD) at 80% deviation	
	Output	3.5 mm connector, unbalanced, 0dBu nominal output level, 16 mW maximum, impedance 32 Ohms	
	User Controls	Channel up/down, SEEK, volume	
Controls	Set up Controls (battery compartment)	Alkaline/NiMH battery switch	
	Programming	Channel Lock Out, Channel Lock, DX/Local, squelch	
	LED	Red, illuminated when unit is on. Flashes when batteries are low, or charging. Flashes when locked and SEEK is pushed.	
Indicators	LCD Display	Channel Designation, lock status, signal strength indication, programming	
	Battery Type	Type: 2 AA batteries, Alkaline or NiMH	
	Battery Life (Listen Batteries)	20 hours alkaline (LA-361), 10 hours NiMH rechargeable (LA-362)	
	Battery Charging (NiMH only)	Fully automatic, 13 hours maximum	
Power	Power Supply (LA-208-03)	7.5VDC, center positive 300mA. Drop in contact points for use with charging cases. Power supply not included (LA-208-03).	
	Power Supply Connector	2.3 mm OD by .7 mm ID, barrel type	
	Power Supply Compliance	RoHS, WEEE, UL, PSE, CE, CUL, TUV, CB compliant	
	Dimensions (H x W x D)	5.0 x 3.0 x 1.0 in (13.0 x 7.6 x 2.5 cm)	
	Color	Dark Grey with white silk screening	
	Unit Weight	3.9 oz. (111 g)	
Physical	Unit Weight with batteries	5.8 oz (164 g)	
,	Shipping Weight	1.0 lbs. (0.45 kg)	
	Door	Manually lockable. Up, down, and power buttons through door. Other controls behind door (see controls)	
	Temperature - Operation	14° - 104°F (-10° - 40°C)	
Environmental	Temperature - Storage	-4 - 122°F (-20° - 50°C)	
	Humidity	0 to 95% Relative Humidity, non condensing	

# **Frequently Asked Questions**

Q What is the difference between the LR-400 and the LR-500?
A The LR-500 gives the user an opportunity to lockout unused channels.
Q Can the LR-500 be used with multiple transmitters?
A Yes. We recommend the LR-500 for use with multiple transmitters. The LR-500 is programmable and can be set to just those channels you need.
Q How many channels can I program into the LR-500?
A 1 to 57 (17 channels with 863 MHz). The receiver has 57 (17 channels with 863 MHz) channels and you can program it to have just the channels you want to access. It can be a two channel receiver, a 12 channel receiver, or use all channels.
Q How many receivers can I have in a system?
As many as you need, the number is endless.
Q What is the function of SQ?
A To reduce noise of its systems, Listen now offers a noise reduction technology called ListenSQ <sup>TM</sup> (on 72 MHz and 216 MHz only). Both the transmitter and receiver must have SQ on to achieve the desired results. If you are planning to use this product with older Listen systems or equipment not manufactured by Listen, you should disable SQ.
Q What is the warranty of Listen receivers?
<ul> <li>A Limited lifetime warranty. The following cases will void the warranty:</li> <li>Misuse, dropping, or any other noticeable cosmetic damage.</li> <li>Charging Alkaline batteries instead of NiMH.</li> <li>Overheating the charging process by closing the lid on the charging case.</li> </ul>
Q How long do the batteries last on the LR-500 receiver?
Alkaline batteries last 30 hours. NiMH rechargeable batteries last 15 hours (72 MHz and 216 MHz). With 863 MHz, Alkaline batteries last 20 hours and NiMH rechargeable batteries last 10 hours.