LR

TECHNICAL DATA

Compact Receiver

- **Tunes over a 75 MHz range***
- **Tracking front-end filters**
- **Digital Hybrid Wireless® with compatibility modes for use with earlier transmitters**
- **Compact size powered by two AA batteries or an optional battery eliminator**
- **LCD with RF spectrum scanning**
- **SmartSquelch™ DSP-controlled, noise based filtering and squelch**
- **DSP-based pilot tone for squelch control**
- **USB port for firmware updates**
- **IR sync port for transmitter setup**

Excellent performance in a small package for ENG and DSLR video production is the purpose and intent of the LR receiver design. Tracking front-end filters block interference from high powered RF signals on nearby channels to preserve the extended operating range. RF spectrum scanning displays accurate results on the LCD to make finding clear spectrum quick and easy.

The receiver is powered by internal AA batteries or with an optional battery eliminator. The top panel includes an IR port for transmitter setup. Firmware updates are enabled via a USB port on the side panel. The housing is made from a solid machined aluminum billet.

Digital Hybrid Wireless® is a patented design that combines 24-bit digital audio with an analog FM radio link to provide outstanding audio quality and the extended operating range of the finest analog wireless systems.

The design overcomes channel noise in a dramatically different way, digitally encoding the audio in the transmitter and decoding it in the receiver, yet still sending the encoded information via an analog FM wireless link.

This proprietary algorithm is not a digital implementation of an analog compandor. Instead, it is a technique which can be accomplished only in the digital domain, even though the audio inputs and outputs are analog signals.

*US Patent 7,225,135

A machined aluminum, hinged door maintains reliable contact with the batteries

*Tuning range varies slightly in different bands

LECTROSONICS®
Rio Rancho, NM, USA
www.lectrosonics.com

Specifications

Operating Frequencies:

Band A1:	470.100 - 537.575 MHz
Band B1:	537.600 - 614.375 MHz*
Band C1:	614.400 - 691.175 MHz

*North American transmitter models exclude the radio astronomy frequency allocation from 608 to 614 MHz.

Frequency selection steps:	Selectable; 100 kHz or 25 kHz
Receiver Type:	Dual conversion, superheterodyne
IF Frequencies:	243.950 MHz and 250.000 kHz
Frequency stability:	±0.001 %
Front end bandwidth:	20 MHz @ -3 dB
Sensitivity	
20 dB SINAD:	1.0 uV (-107 dBm), A weighted
60 dB Quieting:	2.2 uV (-100 dBm), A weighted
Squelch quieting:	Greater than 100 dB typical
Modulation acceptance:	+/-100 kHz max.; varies with selected compatibility mode
Image and spurious rejection:	85 dB
Third order intercept:	0 dBm
Diversity method:	SmartDiversity™ phased antenna combining
FM detector:	Digital Pulse Counting Detector
RF spectrum analyzer:	Single and multiple block scanning modes; coarse and fine views of results
Antenna inputs:	50 Ohm; SMA female connectors
Audio output:	TA3 male (mini XLR) balanced output
Audio output level:	Adjustable -50 to +5 dBu in 1 dB steps; unbalanced output level is 6 dB lower
Front panel controls and indicators:	• Sealed panel with membrane switches • LCD for setup menus and monitoring
Audio test tone:	1 kHz, -50 dBu to +5 dBu output (bal); 1% THD
Transmitter battery type selection:	• AA Alkaline • AA lithium • Timer available for use with all types
Audio polarity selection:	Normal or inverted
Compatibility modes:	• Digital Hybrid (North American, ETSI compliant NU and European) • Lectrosonics 100, 200 and 300 Series • Lectrosonics IFB • Non-Lectrosonics modes 3, 6 and 7 (contact the factory for details)
SmartNR (noise reduction):	OFF, NORMAL, FULL modes (available in Digital Hybrid mode only)
System frequency response:	32 Hz to 20 kHz (+/- 1 dB) receiver only (see transmitter documentation for overall system response)

Signal to noise ratio:

SmartNR	No Limiting	w/Limiting
OFF	103.5	108.0
NORMAL	107.0	111.5
FULL	108.5	113.0

Note: The dual envelope "soft" limiter provides exceptionally good handling of transients using variable attack and release time constants.
Once activated, the limiter compresses 30+ dB of transmitter input range into 4.5 dB of receiver output range, thus reducing the measured figure for *SNR without limiting* by 4.5 dB

Audio Performance:

Frequency response:	32 Hz to 20 kHz (+/- 1 dB) receiver only (see transmitter documentation for overall system response)
Total harmonic distortion:	<0.4 (0.2% typical in Digital Hybrid mode)
Top panel features:	• TA3M audio output jack; • (2) SMA antenna jacks • IR (infrared) port
Operating runtimes:	4 hours, (Duracell Quantum Alkaline)
Current consumption:	360mA at 3 volts (+/- 10%)
Operating temperature:	-20° C to +50°C
Weight:	221 grams (7.1 ozs.) with two AA lithium batteries and two AMJ-Rev. A antennas
Dimensions (housing):	3.21 x 2.45 x .84 in. (82 x 62 x 21 mm)

Specifications subject to change without notice

Top panel provides antenna ports, IR interface and balanced audio output. The belt clip also attaches the shoe mount adapter.

CE

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