

# UCR110

## UHF Compact Receiver

## TECHNICAL DATA



### Feature Highlights

- Ideal for compact DV camcorders
- 256 selectable UHF frequencies
- High sensitivity for extended range
- Dual-band compandor
- Ultra rugged tempered alloy antenna
- 9 Volt battery powered
- Machined aluminum construction
- Electrostatic powder coated and anodized finish

The Lectrosonics 100 system was designed to operate with the new generation of DV camcorders, offering an ultra-compact receiver and modest cost, yet preserving the performance that has become the hallmark of Lectrosonics.

The system offers 256 selectable frequencies over a 25.6 MHz band to avoid interference from local RF sources. The UCR110 receiver is highly sensitive and the matching transmitters provide a full 50mW of output power. The result is exceptional operating range and freedom from drop outs.

The audio signal processing circuitry and audio quality of the 100 Series system rivals much more expensive wireless systems. Wide range input limiting in the transmitters prevents overload distortion from high audio input levels. The result is extremely low noise and distortion, and audio quality that is at home with the finest microphones and post-production facilities.

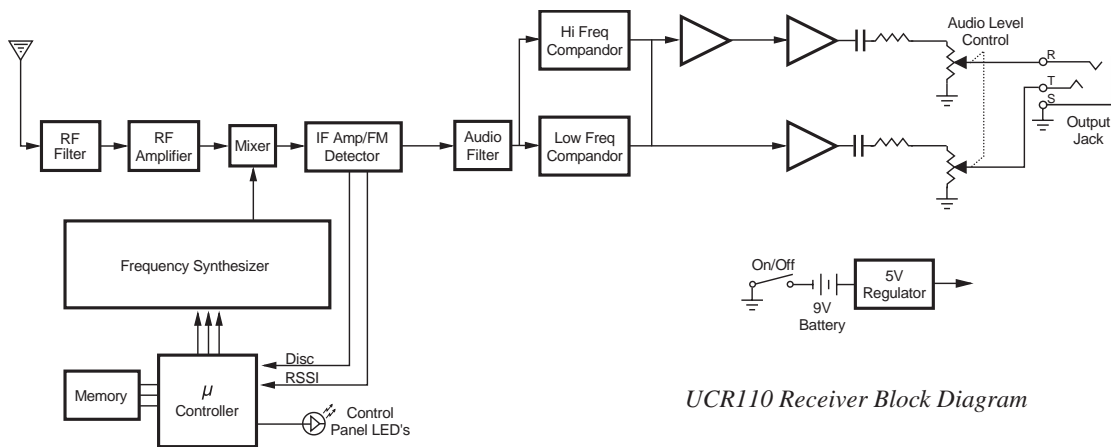
The audio output level is controlled by a front panel knob that is easy to reach in most mounting situations. The knob is used to adjust the output level of the receiver to optimally match the input levels of camcorders, mixers and other sound system components. The output is nominally at 0dBv (line level), but will also match microphone level inputs on camcorders by using an adapter cable offered by Lectrosonics. Two front panel LEDs indicate the level of the audio signal.

An extremely durable, tempered alloy 1/4 wavelength antenna is ideally matched to the tuning range of the receiver. A special insulation on the antenna keeps it semi-rigid and oriented away from the housing to maximize reception.

The UCR110 Receiver is housed in a rugged, lightweight, compact, machined aluminum package for lasting performance in abusive environments. Floating battery contacts compensate for the wide variety of different brands of 9 Volt batteries. The attached, aluminum battery door rotates to open, but cannot be opened accidentally.



*The frequency is selected with two rotary switches on the side of the unit. A sliding cover protects the switches during operation.*



UCR110 Receiver Block Diagram

Highlights of the UCR110 circuitry include microprocessor controlled frequency selection that allows programming by the dealer or Euro service center to meet spot frequency requirements. Internal memory can store up to 256 frequencies at a minimum of 25kHz spacing over a 25.6 MHz band.

The audio processing circuitry includes a proprietary dual-band compressor that separates bass and treble into separate bands and applies four different time constants. Slower time constants are applied to the low frequency (bass) signals and faster time constants to the high frequency (treble) signals to minimize distortion that is typical of single, full band compressors. The result is outstanding audio quality well suited to the finest recording applications.



The battery compartment in the UCR110 receiver rotates to open and close. The door stays attached to the housing and applies pressure to the battery to provide a solid contact.

## SPECIFICATIONS AND FEATURES

<b>Operating frequencies:</b>	537.600 MHz to 862.000 MHz	<b>Audio output:</b>	0 dBv (1 Vrms) UNBALANCED into 600 Ohms
<b>Number of frequencies:</b>	Up to 256 per block; each block is 25.6 MHz wide	<b>Antenna:</b>	1/4 wave vertical (fixed)
<b>Channel spacing:</b>	25 kHz min. (programmable)	<b>Front panel controls:</b>	Single knob controls Audio Output Level
<b>Frequency control:</b>	Crystal Controlled Phase Locked Loop	<b>LED Indicators:</b>	<ul style="list-style-type: none"> <li>• Power (red)</li> <li>• RF (green)</li> <li>• Level (green)</li> <li>• Audio Limiter (red)</li> </ul>
<b>Sensitivity:</b>	1 uV (20 dB SINAD)	<b>Power requirement:</b>	<ul style="list-style-type: none"> <li>• 8 hours with 9V alkaline battery</li> <li>• 15 hours with 9V lithium battery</li> </ul>
<b>Signal/Noise ratio:</b>	105 dB (overall system)	<b>Power consumption:</b>	60 mA
<b>Squelch quieting:</b>	90 dB	<b>Weight:</b>	7.3 oz with battery
<b>AM rejection:</b>	50 dB, 10 uV to 100 mV	<b>Size:</b>	3.6 x 2.4 x 0.8 inches (housing only) (belt clip and knob extend beyond the housing)
<b>Modulation acceptance:</b>	+/-20 kHz		
<b>Spurious rejection:</b>	Greater than 70 dB		
<b>Third order intercept:</b>	0 dBm		
<b>Frequency response:</b>	50 Hz to 18 kHz, ( $\pm 2$ db)		
<b>Distortion:</b>	1% max at 50% modulation (overall system)		

