

RSL **NEVADA** *XT*



rooms, studios or halls. A cost-is-no-object approach was employed in it's design and execution. More important than a low price was that the RSL Nevada XT owner regard it as an audio work-of-art to be treasured. The result is a powerful speaker that's exciting to listen to and will enhance the appearance of the room it's in.

THE BASS RESPONSE

A limiting factor in any speaker's ability to reproduce low fundamental audio frequencies has been the size of the woofer's enclosure. The RSL Nevada XT enclosure has a volume of 2.58 cubic feet. The maximum size woofer that can be tuned properly is 12 inches. In the RSL Nevada XT, a 12-inch woofer and an acoustically-matched 8-inch woofer share the same interior volume. Together both drivers are properly tuned by the internal volume of the RSL Nevada XT. The total cone area is comparable to that of a 15-inch woofer, but is more closely controlled by the two independent motor structures. Power handling is increased. Both woofers have different free air resonance frequencies. This smoothes out the system's resonance peaks.

A 12-inch passive radiator is used to further extend the bass response of the system. A passive radiator is an undriven speaker cone mounted in the enclosure. It must move like a perfect piston at low frequencies or the bass will be muddy. Muddy bass will also mask the midrange and treble. The passive radiator must effectively be immovable at high frequencies. It resonates at a lower frequency than the woofer and increases the low frequency response of the RSL Nevada XT while further smoothing out resonance peaks. The entire woofer system has a cone area over 200 square inches. This allows the RSL Nevada XT to equal the bass range and intensity of larger speakers without doubling or overhang.



The RSL Nevada XT has a Rear-mounted Passive Radiator

THE DESIGN GOALS

The RSL Nevada XT is designed to recreate in the home the acoustical conditions found in a live concert. At a concert, enough electricity to light a small town is channeled through a multiple of high intensity sound reinforcement speakers. In addition to hearing, the concert goer feels the intensity of the bass notes. Concert speakers employ large woofers and horn tweeters that emphasize the brilliance part of the sound spectrum. This brings the performers closer to the listener. In trying to reproduce a concert in the home, many speaker systems lack in overall bass impact and clarity.

The RSL Nevada XT is only slightly larger than a bookshelf speaker. A unique bass array of two different size woofers and a passive radiator yields maximum bass intensity with greater control than other high efficiency designs. Voices and instruments are unmasked by the compression horn tweeter in the RSL Nevada XT. It rivals the clarity of large studio speakers. The RSL Nevada XT is comfortable with the largest power amplifiers although it doesn't require one for satisfactory results. It has the high power response capabilities necessary for live or digital recordings.

The RSL Nevada XT can sit on the floor (with speaker stands, a recommended option) or on a shelf. It's intended for medium to very large-sized



THE WOOFER

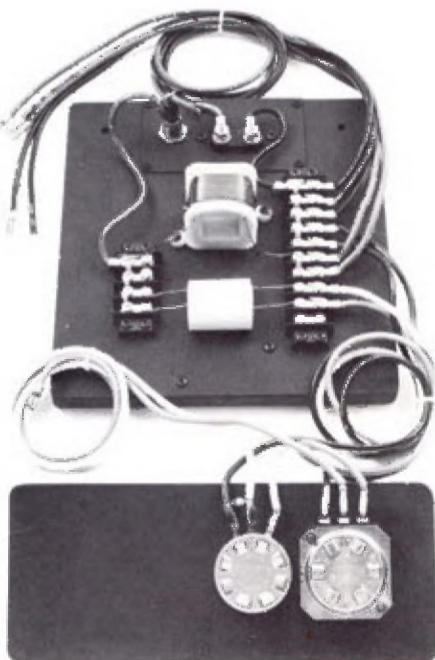
The greatest power demand is put upon a low frequency driver. The RSL Nevada XT 12-inch woofer incorporates a massive 6.5-pound magnet assembly and 2-inch high temperature voice coil. The 8-inch woofer has a 4-pound magnet assembly and 1.5-inch high temperature voice coil. These large magnets allow the RSL Nevada XT to maintain tight control of the bass at high power levels. The rigid ribbed woofer cones have a treated cloth accordion edge for long, but controlled movements.

THE MIDRANGE

The best midrange format for efficient yet uncolored reproduction of voices and instruments is a cone. The RSL Nevada XT 5-inch midrange has a cone that is both light and stiff. If all areas of the cone do not move in unison, coloration and distortion is the result. A separate enclosure tunes out unwanted resonances and isolates the cone from the woofer. The ability to instantly respond to a sound impulse and handle large amounts of power is assured by a 1.5-pound magnet assembly and 7/8-inch high temperature voice coil.

THE TWEETER

The largest playback monitors in virtually every top studio contain costly compression horn tweeters such as the Electro-Voice unit used in the RSL Nevada XT. A horn tweeter's efficiency is unexcelled by any other design. Transient response is quick due to the extremely low mass and minimal excursion of the dome assembly. The horn tweeter in the RSL Nevada XT is protected from high power damage by a solid state RSL tweeter protection circuit.



RSL Nevada XT Crossover Network

THE CROSSOVER NETWORK

The crossover network is the brains of the speaker system. It electronically divides the frequency spectrum and sends the appropriate signal to the speaker's drivers. What makes it design critical is that it must not add distortion or resonances. It must also cause the entire frequency range to arrive at the listener's ears at the exact same instant. The RSL Nevada XT crossover features close tolerance mylar capacitors and saturation-free inductors wound with 18 gauge copper wire to eliminate distortion at all power levels. Fully adjustable high power wire-wound L-pads give full control of the midrange and tweeter output levels. This compensates for deficiencies in room acoustics and accommodates personal preferences. All of the wires in the RSL Nevada XT are of 10 gauge 'Monster Cable', a feature found only in some of the world's most expensive speakers. This special type of wire contributes to the quick audio reflexes and efficiency of the RSL Nevada XT. Perfectly secure internal connections are made with junction blocks. The RSL Nevada XT is equipped with gold-plated 4-way binding post connectors that can accommodate the largest of speaker wires. Fuse protection, accessible from the rear helps to prevent accidental damage. All of the above are what makes the RSL Nevada XT crossover network second to none.



RSL Nevada XT Components

THE ENCLOSURE

The enclosure is the area in which the woofer resonates. If it is not solidly built, it too will resonate adding distortion. Air leaks can degrade the tuning between the woofer and its enclosure resulting in distortion, loss of frequency response, lower power handling ability, and buzzes or rattles. The RSL Nevada XT enclosure is 3/4-inch thick on all sides. Genuine oak is veneered to dense particle board. An ebony/oak finish, preferred by many studios, is available at a lower cost. Carefully mitered joints assure perfect panel fit and airtightness. Interlocking panels further add to its strength. Thick acoustical material to dampen internal resonance and vibration is fully applied inside to all four sides and back. Further, all drivers are sealed to the enclosure with compressed foam gaskets. Almost all speaker manufacturers mount their drivers with wood screws. If a driver is removed and replaced during a repair, the screw can no longer hold a proper seal. To prevent this, the drivers in the RSL Nevada XT are screwed into threaded metal inserts (an expensive process).

THE CABINET FINISH

The RSL Nevada XT genuine oak finish enclosure contains solid and veneered sections. It is produced in the same factory as RSL Audio/Video Furniture (matching models are available). Strict attention is paid to finish. First the completed cabinet is hand-sanded. Then oil and stain are applied and rubbed in by hand. Finally the cabinet is waxed, also by hand. All that is required to maintain the finish is periodic application of a lemon oil (do not use spray wax).

RSL NEVADA XT BASIC SPECIFICATIONS

WOOFERS	
Diameter	12 in (30 cm)/8 in (20 cm)
Magnet Structure	6.5 lbs (3 kg)/4 lbs (1.8 kg)
Voice Coil Diameter	2 in (5 cm)/1.5 in (3.8 cm)
PASSIVE RADIATOR	
Diameter	12 in (30 cm)
MIDRANGE	
Diameter	5 in (12.7 cm)
Magnet Structure	1.5 lbs (680 gm)
Voice Coil Diameter	7/8 in (2.2 cm)
TWEETER	
Horn Dimensions	2 x 5.25 in (5 x 13.3 cm)
ENCLOSURE	
Type	Passive Radiator
ELECTRONIC NETWORK	
Crossover Frequencies	1000 & 5000 Hz
Slope	6 dB/Octave
CHARACTERISTICS	
Frequency Response	28 Hz to 20 kHz
Efficiency*	90 dB
Nominal Impedance	4 Ohms
System Resonance	35 Hz
POWER CAPACITY	
Recommended Minimum	10 Watts RMS
Maximum Power**	300 Watts RMS
DIMENSIONS	
Height	26.5 in (67.3 cm)
Width	17 in (43.2 cm)
Depth	13.5 in (34.2 cm)
Shipping Weight	63 lbs (29 kg)
LIMITED WARRANTY***	
Parts and Labor	Five Years

- *Measured with 1 Watt input, 1 kHz, 1 meter
- **Note: Higher powered amplifiers may be used if care is taken not to operate the speakers at maximum amplifier power for extended periods of time.
- ***Read the complete terms in our stores or on the back of the speaker. The RSL Nevada XT also carries a 7 day satisfaction or your money back guarantee.

RSL Speaker Systems products are available factory-direct through all Rogersound Labs stores.



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