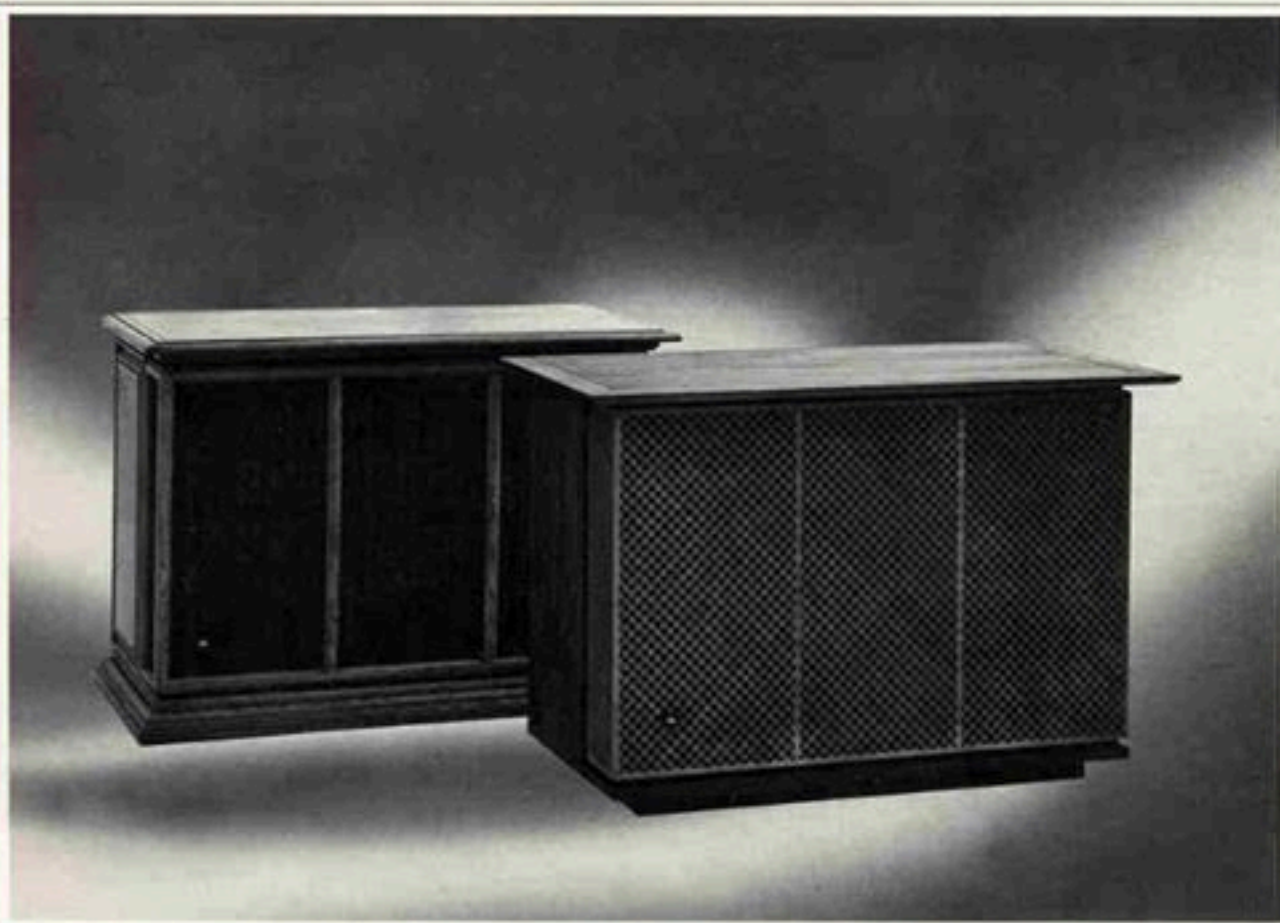


C50 Olympus

C60 Sovereign I

S7R or S8R Loudspeaker System

The Olympus and Sovereign I enclosures reflect the craftsmanship and attention to detail that have made JBL cabinetry the standard of the high fidelity industry. Available separately or with matching equipment cabinets, Olympus and Sovereign ensembles are impressive visual additions to the listening environment.



The Olympus enclosure exemplifies a blending of advanced acoustical engineering and exquisite furniture craftsmanship. Its graceful, serene lines, handsome oiled walnut finish and highly detailed, handcrafted fretwork grille provide the warm, rich feeling of fine furniture. A touch of tradition is found in the extended top surface with its carefully profiled edge; yet the direct expression of form and recessed base mark the design as contemporary in origin. The result is a stately enclosure that will add distinction to a wide variety of contemporary and period room settings.

The Sovereign I is a traditionally styled enclosure of Mediterranean influence. Its detailed molding, overhanging top surface and raised side panels are derived from historical forms. Complemented by a decorator grille of pleated fabric and a classic pedestal base, the Sovereign I takes its place alongside the finest period furnishings. This distinguished enclosure, available in Country Oak or Golden Oak finishes, is appropriate to any interior where the prevailing mood is Spanish, Mediterranean, Italian Provincial or Late Renaissance.

Performance Characteristics

The Olympus and Sovereign I enclosures are acoustically identical. The JBL S7R or S8R loudspeaker system may be installed in either enclosure. Both systems exhibit performance that is clean and effortless, frequency response extending above and below the range of human perception and superior transient reproduction—characteristics that have long been associated with JBL. Exciting bass is achieved by the 15-inch low frequency loudspeaker and matching passive radiator common to both systems. Smooth, accurate propagation of midrange and high frequency program material is provided by a compression driver and horn/lens assembly. The S8R loudspeaker system utilizes a more massive compression driver augmented by an ultra-high frequency ring radiator reproducing the delicate harmonics and overtones that lie above musical fundamentals.

Due to the wide-angle dispersion characteristic of the loudspeaker systems, frequency response measured up to 60 degrees off-axis horizontally does not deviate more than 6 dB from on-axis response.

A number of loudspeaker systems can handle large amounts of power; others are highly efficient. JBL products are unique in their ability to combine both attributes. The S7R and S8R loudspeaker systems, for example, will convert a 1 Watt input into a sound pressure level of 82 dB at a distance of 15 feet. This is approximately twice as loud as ordinary conversation and represents a comfortable listening level, demonstrating that these loudspeaker systems deliver substantial sound output from very little input power.

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System Components

Each component installed in the Olympus or Sovereign I is designed and produced by JBL personnel to the most rigorous standards in the industry. The low frequency loudspeaker frame is a massive aluminum casting. Magnetic structures are precisely machined of low-reluctance iron, energized by high grade Alnico V magnets. Voice coils are fabricated of wire milled to a flat ribbon, wound on the ribbon's edge by hand. A stamped frame and mass-produced voice coils would be less expensive; however, the resultant loss of structural integrity, magnetic force and acoustic efficiency would tend to degrade low-distortion performance and transient response—qualities that have become JBL hallmarks.

Low Frequency—Bass reproduction is accomplished by the same LE15A low frequency loudspeaker and matching PR15 passive radiator in both loudspeaker systems. The 15-inch loudspeaker is capable of reproducing bass fundamentals at full concert hall intensity, generating tones so low that they exist in the threshold between hearing and feeling. The loudspeaker is driven by a massive 20-pound low-loss magnetic assembly that concentrates all of the essential magnetomotive energy in the one place where it contributes most to loudspeaker performance—the voice coil gap. The cone is suspended by a special JBL ring termination which increases bass response and allows long excursion with perfect linearity. Extreme linear excursion, large radiating area, optimum cone density, stiffness and mass and the 4-inch, edgewound copper ribbon voice coil are important engineering advances that enable clean, solid low frequency reproduction without audible distortion, even at very high power levels.

The radiating area of the low frequency loudspeaker is effectively doubled by a matching passive radiator. This second assembly, driven by the acoustic energy generated by the back side of the loudspeaker cone, converts this otherwise wasted energy into audible sound. The result is an extra degree of warmth and spaciousness enhancing bass reproduction of the loudspeaker system.

High Frequency—Each loudspeaker system utilizes a high frequency compression driver. The LE85 compression driver is used in the S7R system. It has a 10-pound magnetic assembly and a 1¾-inch edgewound aluminum voice coil which drive a diaphragm pneumatically drawn to shape from .0022-inch aluminum alloy. A pure silver impedance-controlling ring counteracts voice coil inductance, resulting in greatly improved efficiency through the highest audible frequencies. Energy from the diaphragm is directed through the precisely engineered concentric channels of a phasing plug which insures that sound waves are conducted to the horn in perfect phase relationship. The massive JBL 375 compression driver, augmented by an ultra-high frequency ring radiator provides high frequency reproduction in the S8R system. The compression driver is similar to the LE85, but has a 23½-pound magnetic assembly and 4-inch edgewound aluminum voice coil. The high frequency units of the S8R loudspeaker system provide greater power handling capacity allowing more intense reproduction of transients and percussive sounds.

A horn/lens assembly is used with the compression driver to achieve a wide angle sound dispersion pattern. In each system the acoustic output of the compression driver is directed through an exponential horn and is dispersed by the slant-plate acoustic lens. This sophisticated device, pioneered by JBL, is designed according to advanced sound wave propagation theory and acts exactly as a divergent optical lens. Its precise hyperbolic curvature spreads sound evenly over a 120 degree horizontal arc, restricting vertical dispersion to approximately 45 degrees.

Ultra-high Frequency—The S8R loudspeaker system employs the 075 ring radiator for reproduction of transient overtones and harmonics that lie above musical fundamentals. Its light weight, dural ring diaphragm is driven by a 1¾-inch voice coil of very fine aluminum ribbon wire wound on edge. The coil is immersed in an intense magnetic field generated by a magnetic assembly which is exceptionally large for an ultra-high frequency transducer. Output from the diaphragm radiates directly into the throat of an aluminum horn precisely flared for optimum acoustic coupling. The result is remarkably smooth frequency response extending well beyond the limits of human audibility.

Dividing Network—Both loudspeaker systems utilize the LX5 dividing network to control the transition between the low frequency loudspeaker and the compression driver. The S8R system also has an N7000 dividing network to control the transition between the compression driver and the ultra-high frequency ring radiator. The dividing networks are fitted with controls to allow adjustment of presence and brilliance to accommodate individual listening room acoustics and personal preference.

Power Capacity

The specified power capacity indicates the continuous program power level that can be accepted by a JBL loudspeaker system without damage. Its peak power capacity is considerably greater than the continuous rated value, as indicated by the remarkable transient response of JBL loudspeaker system components. Both the S7R and S8R loudspeaker systems will reproduce clean sound at comfortable listening levels when driven by an amplifier having an output of as little as 10 Watts RMS per channel. However, for reproduction of the full dynamic range of contemporary recordings at high volume, a quality amplifier delivering from 60 to 150 Watts RMS per channel will provide optimum performance. Such an amplifier has the reserve power necessary for accurate reproduction of transients which can reach momentary peaks equivalent to ten times the rated power handling capacity of the loudspeaker system. In almost all cases, the volume level generated by a JBL loudspeaker system will become noticeably discomforting before it can be damaged by excessive power from the amplifier.

Specifications

JBL attributes major importance to the validity of published information. Rather than repeat the ambiguity of most technical specifications, JBL has traditionally refrained from listing data for which no widely-accepted test procedure has been established. In the absence of such standards any well-equipped laboratory can legitimately produce a variety of frequency response curves for a loudspeaker, depending on the conditions selected. At JBL the final analyses are comprised of extensive listening sessions. Although laboratory data are an integral part of the process, the trained ear is the ultimate criterion. The success of this philosophy is reflected in the enthusiastic acceptance of JBL systems by recording studio engineers, producers and performers—professionals whose artistic achievements are closely related to the equipment they use. In every critical listening situation—wherever the sound of the loudspeaker must be depended upon—JBL is the overwhelming professional choice.

Power Capacity*	S7R	100 Watts continuous program
	S8R	125 Watts continuous program
Nominal Impedance		8 ohms
	Dispersion	120 degrees horizontal, 45 degrees vertical
Crossover Frequency	S7R	500 Hz
	S8R	500 and 7000 Hz
Efficiency		1 Watt input produces 82 db Sound Pressure Level at a distance of 15'. (Note: 75-80 db is a comfortable listening level.)
Finish	Olympus	Oiled Walnut
	Sovereign I	Country Oak or Golden Oak
Grille	Olympus	Wood Fretwork
	Sovereign I	Pleated Brown Fabric
Dimensions	Olympus	26½" x 40" x 20" deep 67 x 102 x 51 cm deep
	Sovereign I	26½" x 38¾" x 19½" deep 67 x 98 x 50 cm deep
Shipping Weight	Olympus S7R	163 lbs (74 kg)
	Olympus S8R	180 lbs (82 kg)
	Sovereign I S7R	176 lbs (80 kg)
	Sovereign I S8R	183 lbs (83 kg)

*Based on a laboratory test signal. See Power Capacity section for amplifier power recommendation.