UREI
ELECTRONIC
PRODUCTS

POWER AMPLIFIERS

ES SERIES



ES 150

ES 300

ES 600

ES 900

ES 1200

JBL UREI ELECTRONIC PRODUCTS

ES SERIES

Every audio professional wants perfection. Sound consultants, contractors, engineers, and musicians, all strive for the most exacting accuracy in audio reproduction.

JBL pursues this same ideal, and this is the foundation of JBL's stature in the recording and sound reinforcement industries worldwide. Now, our new ES Series amplifiers bring JBL innovation to the first link of the sound production chain, whether the environment is a small club or the largest stadium.

The five ES models represent the pinnacle of JBL technology and design. Precision calibrated digital input attenuators with a unique "lock-out" function. Plug-in input port on the back of the amps to utilize tomorrow's advances in technology, including remote control by PC. A continuously variable-speed fan, that runs quietly and efficiently by sensing the temperature of the heat sinks.

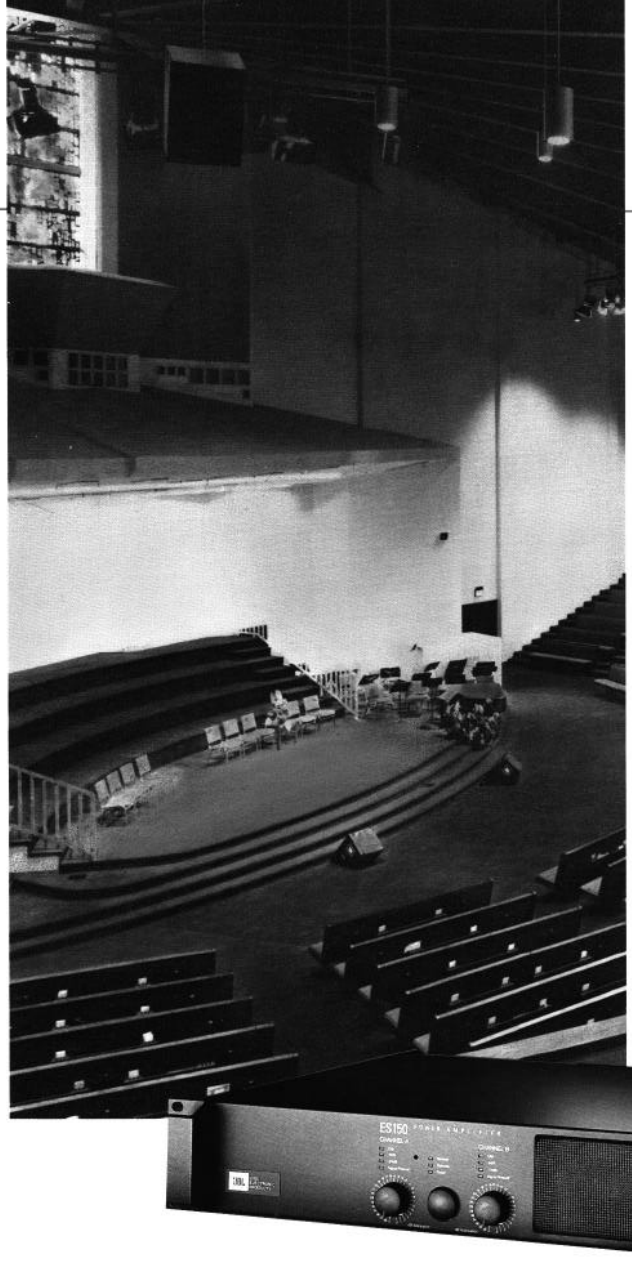
This no-compromise technology is combined with the reduced size and weight of High Frequency Power Conversion technology in our high power models to achieve a new standard of performance, reliability, and user-friendliness for sound contractors.

The JBL ES Series amplifiers.

JBL UREI
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ES150

ES300



The new ES150 delivers 75 watts per channel of undistorted power into 4 ohms, making it ideal for varied applications: choral, musical, and public address. Power, however, isn't the whole story.

Like all models in the ES Series, the ES150 features Computer Aided Design quick-access construction for easier on-site maintenance capability. Individual channels lift out of the internal chassis as single units, allowing rapid field replacement. The front-panel LED readout of operating parameters allows at-a-glance monitoring. With our new thermally proportional rear-to-front cooling systems, this trim performer stays cool and quiet enough for your low-noise spec installations.

More power in the same compact size as the ES150. The ES300 amplifier packs 150 watts per channel at 4 ohms into a sleek two-piece enclosure only two rack units high. The continuous variable-speed fan keeps things both ultra-quiet and ultra-cool. This combination makes the ES300 ideal for bi-amp monitoring in the control room.



ES 600

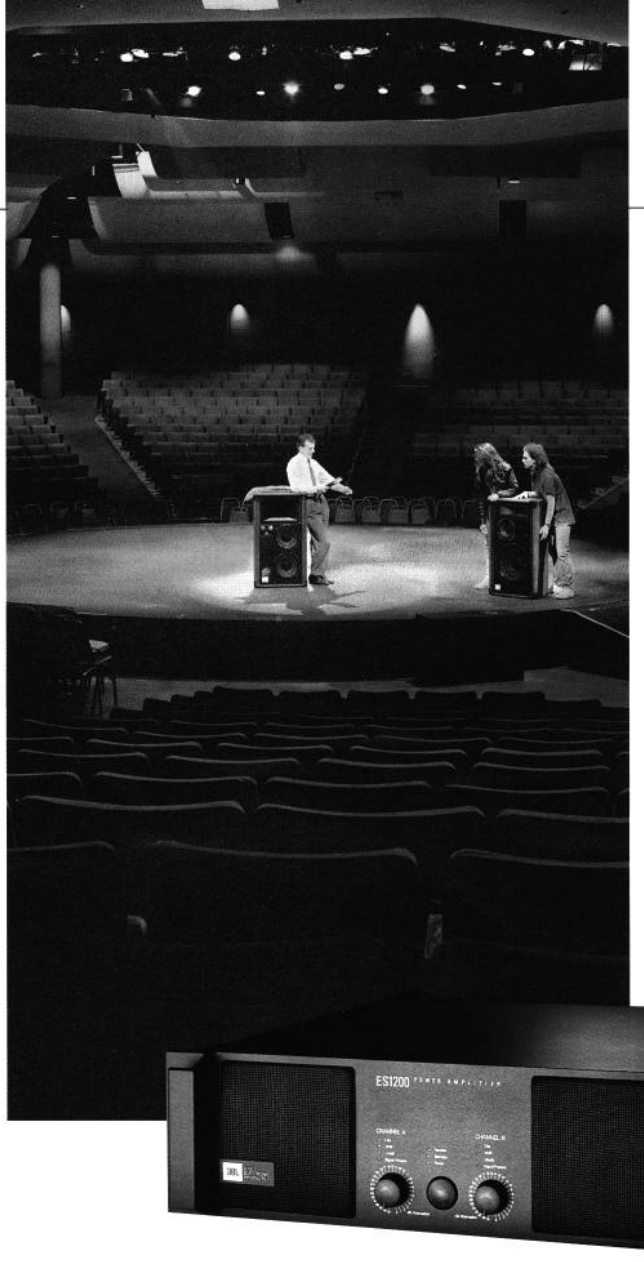
ES 900



The ES600 features 300 watts per channel into 4 ohms, a weight of 46 lbs, and delivers 600W, 8 ohm bridge mode. With its gain setting lock-out function, variable-speed rear-to-front cooling system, LED readout of key operating functions, and reliable modular construction, this is indeed a complete performer that stars in any setting.

The new ES900 combines High Frequency Power Conversion technology (HFPC) with 450 watts per channel into 4 ohms. The result is a dramatic reduction in weight for such hefty power. In fact, the ES900 weighs 44 lbs. and measures only 2 rack units in height. Any way you measure it, the ES900 packs-a-wallop. 460 watts per channel into 4 ohms, 300 watts a side into 8 ohms, bridgeable to 900W mono. Due to High Frequency Power Conversion, the ES900 technically advanced, with its lock-out feature of digitally set gain and plug-in port for future JBL advances. Clean, because like all ES amplifiers, the ES900 features low-feedback, low-distortion circuits.

Add its modular pull-out construction, LED readout of key parameters, and continuously variable rear-to-front cooling system, and you've got a top performer for sound reinforcement playback or large paging and public address systems.



ES1200



The ES1200 offers the most power of any ES Series model... 600 watts per channel into 4 ohms. But incredibly, HFPC technology results in a weight of just 46 lbs.! So the ES1200 is ideal for large installations, and wherever multiple amps are a consideration. It runs smooth, utilizing a turn-on surge limiter. It runs cool with its rear-to-front forced air cooling system. And it runs quiet, because the variable-speed fan continuously responds to heat sink temperature. The only thing that gets hot is the music.

The ES1200 is the unobtrusive, reliable, tamper-resistant, and user-friendly answer for the most sophisticated applications.

Preliminary Specifications ES Series Amplifiers

*Common to all models except where noted

Rated Power	4 Ohm/Ch	8 Ohm/Ch	8 Ohm Bridge	16 Ohm Bridge
ES150	75 W	50 W	150W	100 W
ES300	150 W	90 W	300 W	180 W
ES600	300 W	190 W	600 W	380 W
ES900	450 W	300 W	900 W	600 W
ES1200	600 W	360 W	1200 W	720 W
Midband Power				
ES150	85 W	60 W		
ES300	175 W	110 W		
ES600	330 W	200 W		
ES900	500 W	310 W		
ES1200	650 W	390 W		

Rated Power:	is minimum continuous sine wave output per channel, with both channels driving their rated load over a power bandwidth of 20 Hz to 20 kHz. Maximum total harmonic or intermodulation distortion measured at any power level from 250 milliwatts to rated power is less than 0.1%. Maximum Transient Intermodulation Distortion is less than 0.05%.
Midband Power:	is maximum output power per channel, with both channels driven, at onset of clipping with 1 kHz sine wave, THD 1%.
Frequency Response:	±1 dB, 20 Hz to 20 kHz, at any level up to rated power.
Noise:	At least 100 dB below rated output (15.7 kHz noise bandwidth, A weighted).
Input:	Balanced bridging differential amplifier.
Input Impedance:	Line: 40 k ohms used as balanced input; 20 k ohms used as unbalanced (single-ended) input.
Maximum Input Level:	+20 dB (7.75 V rms).
Input Sensitivity:	1.1 V for rated output into 8 ohm load.
Voltage Amplification:	Variable; maximum 25 dB (ES150), 28 dB (ES300), 31 dB (ES600), 33 dB (ES900), 34 dB (ES1200).
Rise Time:	Less than 6 microseconds (limited by input filter).
Slew Rate:	Greater than 40 Volts per microsecond.
Damping Factor:	Greater than 200 at any frequency from 20 Hz to 1 kHz into 8 ohm load.
AC Power:	Typical Power Consumption: At idle (approx.): 40 W (ES150), 50 W (ES300), 60 W (ES600), 120 W (ES900), 120 W (ES1200) At rated output (4 ohms both channels): 400 W (ES150), 700 W (ES300), 1200W (ES600), 2000 W (ES900), 2400 W (ES1200)
DC Output Offset:	± 10 millivolts maximum.
Polarity:	Positive-going signal on pin 3 of XL or barrier strip + terminal gives positive-going signal at + output terminal.
Connectors:	Input connectors are Female XL style 3 pin and barrier strip wired in parallel. Output connectors are 5-way binding posts on ¾ inch (19mm) centers.
Controls:	Channel Gain (2), Power, Stereo/Bridge Mono/Dual Mono Switch, Ground Lift Strap on Barrier Strip.
Channel Gain (dB):	0, -1, -2, -3, -4, -5, -6, -7, -8, -9, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -20, -22, -24, -26, -28, -30, -32, -36, -42, -∞
Indicators:	Power, Signal Present (2), -24 dB (2), -8 dB (2), Clip (2), Standby, Remote.
Dimensions:	19 inch Rack Mounting. ES150, ES300, ES600: 3½ inches high by 14½ inches deep to rear panel. 16 inches depth to rear of Rear rack mounting ears. ES900, ES1200: 5¼ inches high by 14½ inches deep to rear panel. 16 inches depth to rear of Rear rack mounting ears.
Net Weight:	ES150: 32 lbs.; ES300: 34 lbs.; ES600: 40 lbs.; ES900: 39 lbs.; ES1200: 39 lbs.
Materials:	Chassis is plated and painted steel. Rack ears and handles are painted aluminum.

*JBL/UREI continually engages in research related to product improvement. The information contained in this provisional data sheet is for INITIAL PRELIMINARY reference only.

Features

*Common to all models

Rear Panel:	Input Connectors: XLR Barrier Strip Ground Lift Jumper
	Mode Switch: Stereo/Dual Mono/Bridge Mono
	Output Connections: 5-Way Binding Posts In Line on ¾ in. Centers Rear Input panel may be removed and replaced with optional input accessories Locations to attach rack supports at rear panel Circuit Breakers on ES150, 300, 600
Front Panel:	Power Switch 1 dB/Step Input Level Controls. Digitally controlled. Recessed Lockout switch disables Front Panel Gain Controls. Rack Handles LED Indicators: Power; Input Signal Present; Output Level -24 dB, -6 dB, Clip; Standby; Remote
Other:	Fan cooled (air flow is back-to-front). Washable filter in rear. Low inrush current design. Designed to the requirements of UL and CSA