

Professional Series Model 6020 Power Amplifier



The JBL 6020 is a highly reliable, conservatively rated amplifier, designed for professional sound engineering applications where a high degree of performance is required.

The circuitry has been carefully designed to reduce the possibility of failure within the specified environmental and electrical conditions. A protective circuit is utilized in this amplifier which makes it virtually impossible to damage it under any conditions of overload, including shorted or grossly mismatched load, inductive load at low frequencies, capacitive load at high frequencies, excessive input signal, white noise or installation errors.

The JBL 6020 can be overdriven by at least ten times normal input voltage, from 40 Hz to 15 kHz, and eventually produces square waves increasing in RMS value up to about 250 Watts at which point the output actually begins to decrease.

The DC fuse is intended as a protective device for the power supply in the event of output stage malfunction. In the event of fan failure, the thermal switch will activate if the heat sink temperature exceeds 200°F.

The 6020 amplifier is designed for maximum flexibility in varying input and output arrangements. A standard unbalanced 50,000-ohm input is provided which can be converted to balanced line bridging or matching with the installation of the accessory 5195 transformer. A 250-Hz low cut filter switch reduces the possibility of damaging horns. All the power outputs are balanced and the bridging output is unbalanced.

For studio applications, broader bandwidth and reduced distortion levels can be achieved with slight modification of the circuitry. Bypassing the output transformer results in a 200-Watt output at less than 0.5% total harmonic distortion, 30 to 12,000 Hz (± 0.5 dB) operating into a 4-ohm load.

The excellent engineering of this unit is accompanied by an equally excellent layout with serviceability in mind at all times. All components are accessible and easily replaced with particular emphasis on output and driver device removal and installation.

JBL

Model 6020- Power Amplifier

Architectural Specifications

The amplifier shall be capable of delivering an output of 250 Watts RMS @ 1000 Hz with less than 4% THD; 200 Watts RMS with less than 0.5% THD, 35-12,000 Hz.

The hum and noise shall be at least 90 dB below 200 Watts measured 10 Hz to 1 MHz with a 600 ohm input termination. No spurious oscillation shall be present with any combination of grounded or open input connections.

The high impedance program input shall be provided with a socket to accommodate a balanced line transformer with isolation. Matching and bridging inputs shall be available. Screw type terminal board shall be provided for the balanced line inputs as well as for the high impedance unbalanced input. In addition, a phono plug shall be provided for the high impedance input. A low frequency cut filter switch shall be provided.

The amplifier shall have balanced 8-ohm, 16-ohm and 70.7-volt outputs on a screw type terminal board listed by Underwriters' Laboratories, Inc. for class 2 wiring.

The amplifier shall be equipped with the protective circuit which will prevent damage due to overload. The amplifier shall be capable of being overdriven, from 40 Hz to 15 kHz, by at least ten times the rated input voltage in the maximum gain position. This overdrive condition shall not cause the amplifier to malfunction or enter the "protect" mode. The power drawn from the AC line shall not increase by more than 30% at 200 Watts output between 1 kHz and 12 kHz. The amplifier shall be capable of sustained 150 Watts output at 12 kHz for at least one hour without malfunctioning or entering the "protect" mode.

The amplifier shall operate on 120 V AC, 50/60 Hz power source. The performance specifications shall be listed under SPECIFICATIONS and shall be met or exceeded.

The amplifier shall be listed by the Underwriters' Laboratories, Inc.

The amplifier shall be JBL Model 6020.

Specifications

Power Gain	73 dB	-
Input Sensitivity		
Unbalanced HiZ (50 000 ohm)	0.7 volts	
Balanced bridging with accessory 5195 transformer (15 000 ohm)	0.383 volts	--
Balanced matching with accessory 5195 transformer (600 ohm)	77 millivolts	
Power Output	-200 Watts at less than 0.5% THD, 35 to 12,000 Hz	
	260 Watts at less than 4% THD, - at 1000 Hz	
Intermodulation Distortion (SMPTE Standard)	Less than 2% at 200 Watts	-
	Less than 1% at 10 Watts	
	Less than 1% at 150 milliwatts	
Frequency Response	20 to 20,000 Hz ± 1 dB measured at 1 Watt	-
Load Impedance	4 ohms unbalanced	
	8, 16 or 25 ohms transformer isolated	
Load Voltage	28, 40, 57, 70.7 volts	
Output Regulation	Less than 15%	
S/N Ratio	Better than 90 dB below 200 Watts	
Filter	Low cut, 250 Hz, 6 dB/octave	
Controls		
Power	On-off	—
Level	Continuously variable	
Low Cut Filter	In-out, rear panel mounted	
Indicators		
Normal	Green—power on, safe operation	
Protect	Red—thermal overload, amplifier in protect mode	-
Power Supply	120V AC. 50/60 Hz	
	52 Watts at zero signal level	
	282 Watts at 70 Watts output	
	370 Watts at 200 Watts output	
Fuse	6y4-amp, slow-blow	
Operating Temperature	Full performance to 150°F (65°C)	
Dimensions	5" x 19" x 10" deep	
	22" x 4 8" x 25 cm deep	
Mounting	5 EIA standard rack spaces	
Panel Finish	Non-glare baked enamel; light gray	
Special Features	Overload protection circuit	
	Forced air cooling	
	AC convenience outlet (unswitched)	
Net Weight	56 lbs. (25 kg)	
Shipping Weight	59 lbs (27 kg)	
Warranty	2 years	
Listing	Underwriters' Laboratories Inc	
Accessory	5195 plug-in matching/bridging transformer	

Professional Series

Professional Division

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