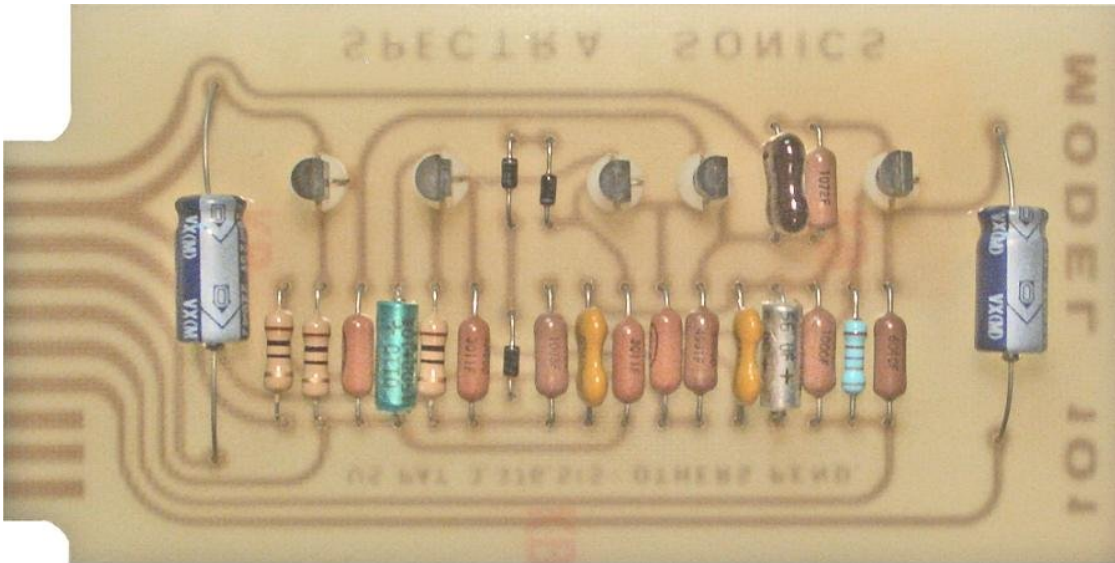




Model 101 Audio Amplifier Module



FEATURES

- ❑ LESS THAN 1/100TH OF 1% THD
- ❑ -130 dBu EQUIVALENT INPUT NOISE
- ❑ SQUARE WAVE RESPONSE
- ❑ PEAK OVERLOAD PROTECTION

GENERAL DESCRIPTION

As the most advanced solid-state audio amplifier designed specifically for professional use in the fields of recording, radio, broadcast, film and sound reinforcement, the SPECTRA SONICS Model 101 amplifier satisfies all amplifier requirements within an audio control system with a single design, fulfilling the individual specifications of each function with ease. It performs the functions of microphone preamplifier, booster amplifier, mixing amplifier, program amplifier, line amplifier and other such functions required up to line levels.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The amplifier shall be a modular (plug-in) printed circuit card and shall contain all silicon transistors and diodes. Gain shall be 40dB + or - .1dB, externally adjustable from 40 to 50dB. Total harmonic distortion at +18dBu shall not exceed 1/100th of 1%, from 20Hz to 20kHz, frequency response shall be within .1dB from 10Hz to 200kHz, noise shall not exceed an equivalent input of -127dBm unweighted (20Hz to 20kHz) with input terminated with 600 ohms, and phase shift shall not exceed 5 degrees from 35Hz to 100kHz. The amplifier shall be direct coupled except for input and output, and shall be capable of reproducing square waves to 50kHz. The amplifier shall be SPECTRA SONICS Model 101.

SPECIFICATIONS

Gain	40dB +/- .1dB (any desired gain from 40dB to 55dB By single external resistor change).
Source Impedance	50 ohms to INFINITY
Input Impedance	600 ohms +/- 1%
Output Loading	600 ohms to INFINITY
Maximum Undistorted Output	+18dBu
Overload Recovery Time	1 microsecond for up to 1000% overload.
Frequency Response (+21dBu)	Within .1dB from 10Hz to 200kHz
Total Harmonic Distortion +18dBu, 20Hz to 20kHz	Unmeasurable: less than 1/100 th of 1% (Measurement Residual).
Intermodulation Distortion +18dBu, 60Hz & 7kHz, 4:1	Unmeasurable: less than 4/100 th s of 1% (Measurement Residual).
Output Noise	Not over an input equivalent of -127dBu, unweighted 20Hz to 20kHz, input terminated 600 ohms (-130dBu, 50 OHMS terminated).
Phase Shift	Less than 5° from 35Hz to 100,000Hz
Capacitive Loading	Stable under any condition of pure capacitive loading At input and/or output.
Ambient Temperature Range	40 degrees to 140 degrees Fahrenheit
Power Requirements	24 VDC at 20 mA
Physical Dimensions And Weight	2 ½ " X 5" X ½ ", Net Weight 2 ounces, shipping weight 6 ounces.

TRANSIENT RESPONSE AND STABILITY

Utilizing amplifier square wave response as an indication of both transient and stability performance. The response at 20Hz is limited only by coupling capacitors. Stability of the amplifier is indicated by the absence of any ringing or overshoot.

SPECTRA SONICS

LEADER IN ADVANCED TECHNOLOGY

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