

5201PS, 5201PS-8, 5251PS, 5101PS, 5101PS-8, 5151PS

**TWO INPUT, ONE OUTPUT MIXER CARDS WITH
PROGRAMMABLE GAIN CONTROL (PGC) AND SWITCH**

DESCRIPTION

The 5201PS subgroup of the 5000 Series Audio Processing System consists of six cards as described in Table 1 below. Each card has one or two balanced inputs mixed to one output.

Cards having line level inputs use Model 100L Active Input Modules for input signal processing. Cards having microphone level inputs use Model 150M Active Input Modules for input signal processing. All cards with a '-8' suffix use Model 208S 8 Watt Power Amplifier Module in the output and have the capability of delivering 8 W to an 8 Ω speaker load. All other cards except expansion cards ('E' suffix) use Model 200L Active Output Modules, with balanced floating outputs, as drivers for the external loads.

Each input includes a Model 120P Programmable Gain Control which maintains an almost constant average output level without the performances compromises of a compressor, and a digital switch to allow the input to be enabled and disabled remotely. Each card has a red LED switch status indicator for each input. When the input is ON the indicator is lit. The LEDs are mounted on the front edge of the card so that they may be observed while the system is operating. The upper LED is associated with input 1, and the lower with input 2. Single input cards use input 1.

MODEL	NUMBER OF INPUTS	INPUT LEVEL	SWITCH DRIVE	NUMBER OF OUTPUTS	OUTPUT LEVEL
5201PS	2	Line	Ground = ON	1	Line
5201PS-8	2	Line	Ground = ON	1	Speaker
5251PS	2	Microphone	Ground = ON	1	Line
5101PS	1	Line	Ground = ON	1	Line
5101PS-8	1	Line	Ground = ON	1	Speaker
5151PS	1	Microphone	Ground = ON	1	Line

Table 1 - Model Descriptions



SPECIFICATIONS

ELECTRICAL

1. Maximum Gain	
5201PS, 5101PS	44 dB
5201PS-8, 5101PS-8	54 dB
5251PS, 5151PS	77 dB
2. Input Gain Range	
5201PS, 5201PS-8, 5101PS, 5101PS-8	-2 dB - +18 dB
5251PS, 5151PS	+26 dB - +51 dB
3. Maximum Input Level	
At Minimum Input Gain	
5201PS, 5201PS-8, 5101PS, 5101PS-8.	+22 dBu
5251PS, 5151PS	-5 dBu
At Maximum Input Gain	
5201PS, 5201PS-8, 5101PS, 5101-8.	+2 dBu
5251PS, 5151PS	-31 dBu
4. Input Impedance	
5201PS, 5201PS-8, 5101PS, 5101PS-8,	10 M in parallel with 1000 pF
20 Hz - 20 kHz, Balanced	
5251PS, 5151PS,	12 k Ω , \pm 5%
20 Hz - 20 kHz, Balanced	
5. Maximum Output Attenuation	>90 dB
6. Maximum Output Level	
5201PS, 5101PS, 5251PS, 5151PS	+10 dBu, min
R _L \geq 600 Ω	
5201PS-8, 5101PS-8.	+8 VRMS, min
R _L \geq 8 Ω	
7. Output Impedance	
5201PS, 5101PS, 5251PS, 5151PS.	<0.5 Ω
20 Hz - 20 kHz, Balanced and Floating	
5201PS-8, 5101PS-8	<0.5 Ω
20 Hz - 20 kHz	
8. Frequency Response	\pm 0.5 dB
20 Hz - 20 kHz	
9. Total Harmonic Distortion, THD	
5201PS, 5101PS, 5251PS, 5151PS	<.03%
+10 dBu, 20 Hz - 20 kHz	
5201PS-8, 5101PS-8	<.3%
8 W, R _L =8 Ω , 20 Hz - 20 kHz	
10. Intermodulation Distortion, IMD	
5201PS, 5101PS 5251PS, 5151PS	<.05%
+10 dBu, 60 Hz/7 kHz	
5201PS-8, 5101PS-8	<.3%
8 W, R _L =8 Ω , 60 Hz/7 kHz	

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11. Signal-to Noise Ratio, S/N	
5201PS, 5101PS	>95 dB
Unity Gain, referred to +4 dBu, 22 Hz - 22 kHz filters	
5201PS-8, 5101PS-8	>95 dB
Below 8 W reference, 16 dB gain, 22 Hz - 22 kHz filters	
5251PS, 5151PS	>76 dB
54 dB Gain, referred to +4 dBu, 22 Hz - 22 kHz filters	
12. Common Mode Rejection Ratio, CMRR	
5201PS, 5201PS-8, 5101PS, 5101PS-8	>60 dB
20 Hz - 20 kHz	
5251PS, 5151PS	>80 dB
20 Hz - 20 kHz	
13. Programmable Gain Control Characteristics at Minimum Input Gain Setting	
Sampling Threshold	
5201P, 5201P-8, 5101P, 5101P-8	-30 dBu
5251P, 5151P	-58 dBu
Gain Reduction Threshold	
5201P, 5201P-8, 5101P, 5101P-8	-16 dBu
5251P, 5151P	-44 dBu
Maximum Gain at Gain Reduction Threshold	
5201P, 5101P	24 dB
5101P-8, 5101P-8	18 dB
5251P, 5151P	52 dB
14. Switch Control Characteristics	
5201PS, 5201PS-8, 5251PS, 5101PS, 5101PS-8, 5151PS	
Switch Control Terminal Open	Channel OFF
Switch Control Terminal Grounded	Channel ON
15. Power Requirements	
Supply Voltage	±15 V
Typical Current Drain	
5201PS	92 mA
5201PS-8	
Quiescent	94 mA
8 W, $R_L=8 \Omega$	500 mA
5251PS	96 mA
5101PS	62 mA
5101PS-8	
Quiescent	64 mA
8 W, $R_L=8 \Omega$	500 mA
5151PS	64 mA
16. DC Voltage Short Circuit Protection	
5201PS, 5251PS, 5101PS, 5151PS, 5201PS-8, 5101PS-8	1.5 A Pico Fuse



MECHANICAL

1. Size (maximum Overall Dimensions)

Height	(7.11 cm) 2.8"
Width	(3.18 cm) 1.25"
Depth	(21.3 cm) 8.4"

2. Weight

5201PS	(331 gm) 0.73lb
5201PS-8	(318 gm) 0.70lb
5251PS	(331 gm) 0.73lb
5101PS	(227 gm) 0.50lb
5101PS-8	(213 gm) 0.47lb
5151PS	(222 gm) 0.49lb

ENVIRONMENTAL

1. Operating Temperature Range (+32 °F - +131 °F) 0 °C - +55 °C
2. Storage Temperature Range. (-40 °F - +158 °F) -40 °C - +70 °C

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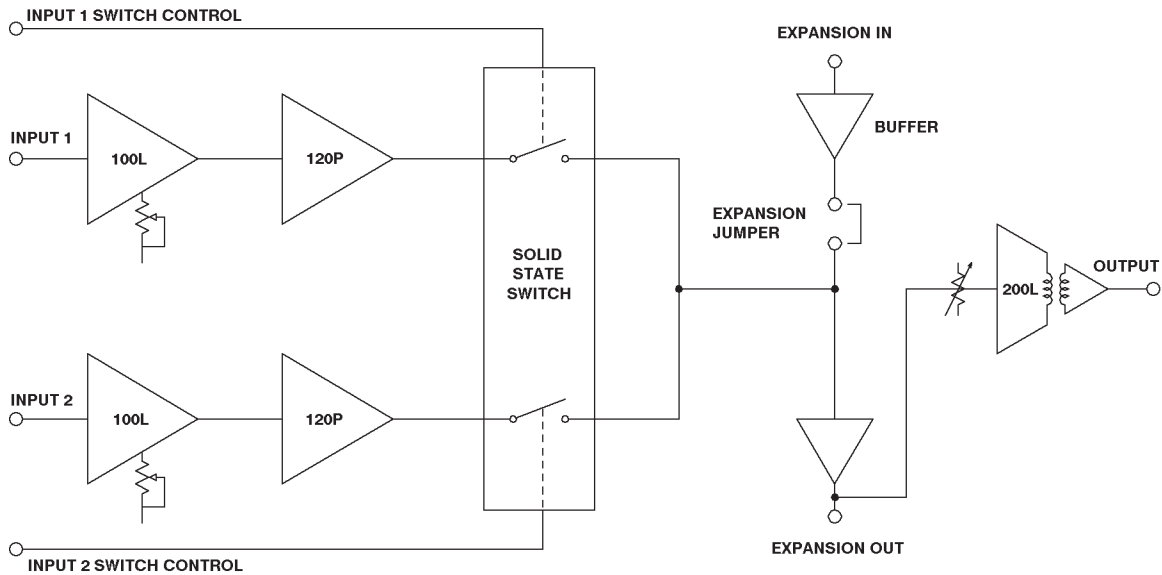


Figure 1 - 5201PS Block Diagram

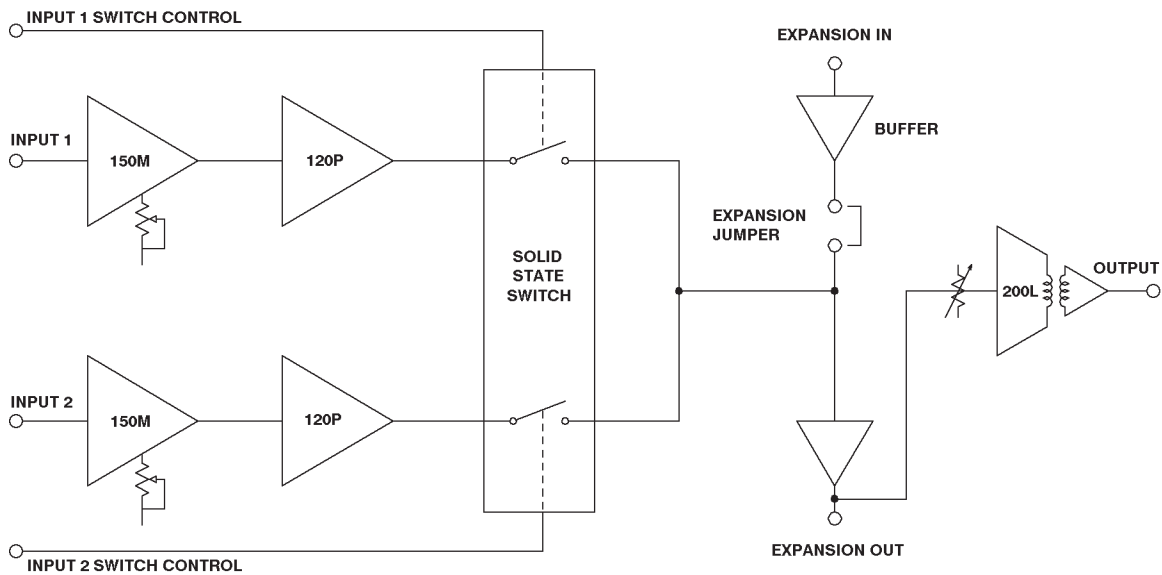


Figure 2 - 5251PS Block Diagram



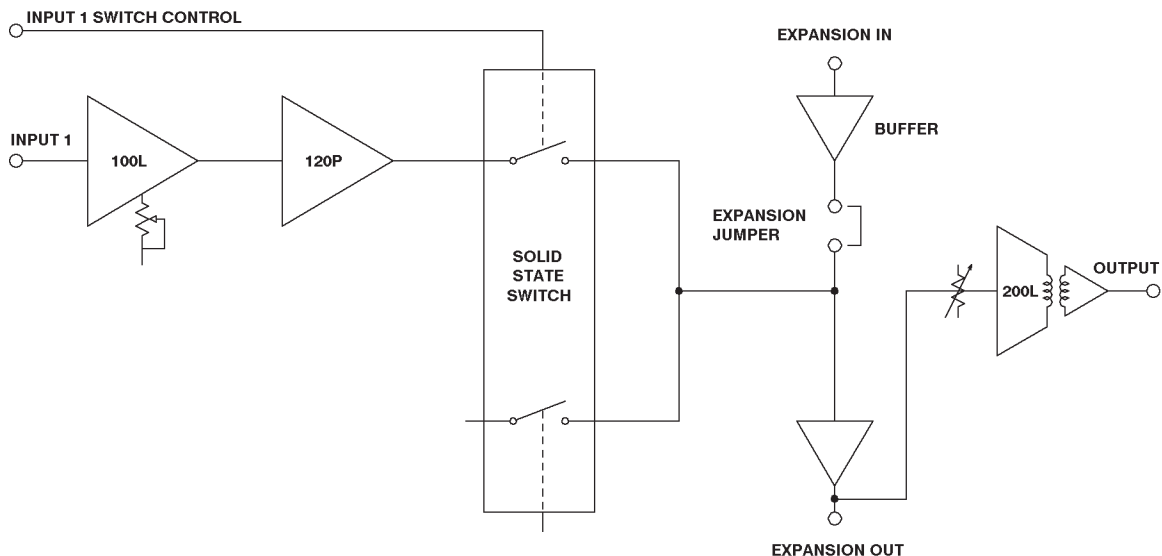


Figure 3 - 5101PS Block Diagram

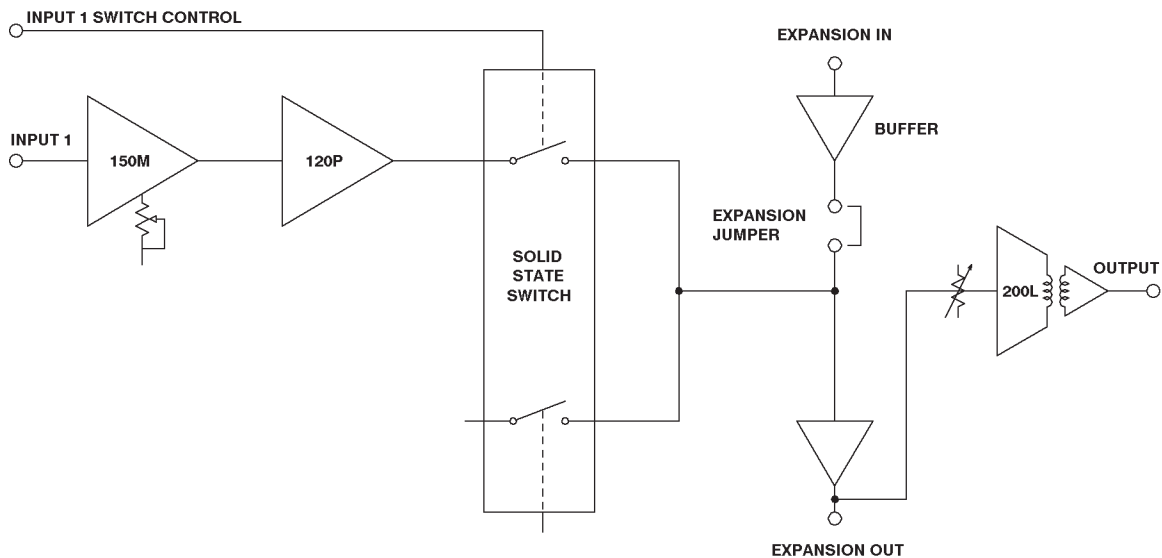


Figure 4 - 5151PS Block Diagram

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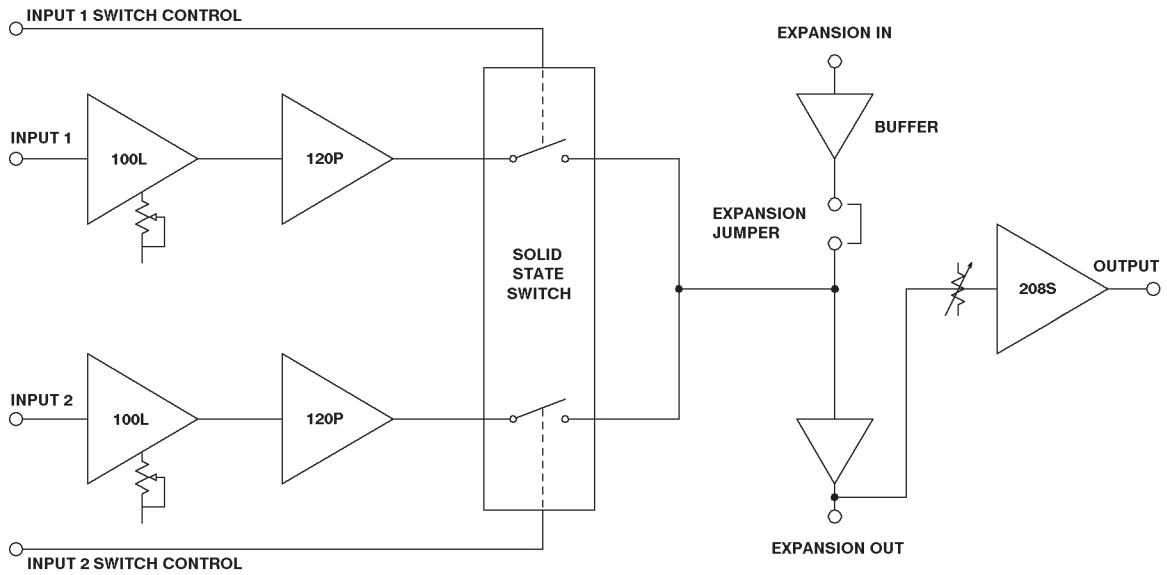


Figure 5 - 5201PS-8 Block Diagram

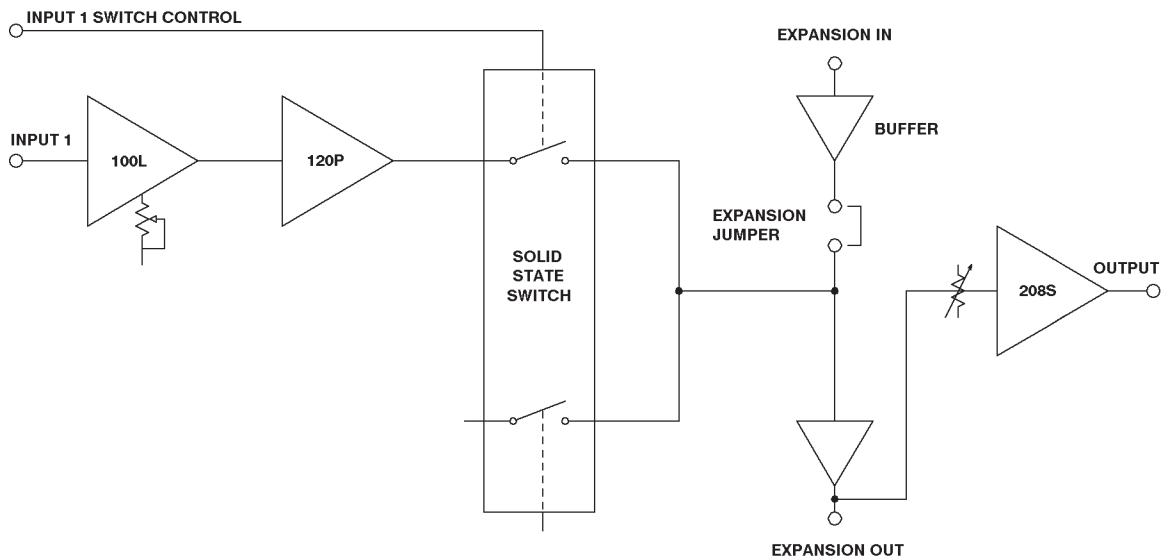


Figure 6 - 5101PS-8 Block Diagram



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