

5201VS, 5201VS-8, 5251VS, 5101VS, 5101VS-8, 5151VS

**TWO INPUT, ONE OUTPUT MIXER CARDS WITH
 VOLTAGE CONTROLLED AMPLIFIER (VCA) AND SWITCH**

DESCRIPTION

The 5201VS subgroup of the 5000 Series Audio Processing System consists of twenty 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 use Model 200L Active Output Modules as drivers for the external outputs.

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

Table 1 - Model Descriptions

Each input has a Model 142 Voltage Controlled Amplifier for remote control of the input level, and a digital switch to allow the channel to be enabled and disabled remotely. Level control is accomplished with a 10 kΩ linear taper pot.

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.



SPECIFICATIONS

ELECTRICAL

1. Maximum Gain	
5201VS, 5101VS	24 dB
5201VS-8, 55101VS-8	34 dB
5251VS, 5151VS	57 dB
2. Input Gain Range	
5201VS, 5201VS-8, 5101VS, 5101VS-8	-2 dB - +18 dB
5251VS, 5151VS	+26 dB - +51 dB
3. Maximum Input Level	
At Minimum Input Gain	
5201VS, 5201VS-8, 5101VS, 5101VS-8.	+22 dBu
5251VS, 5151VS.	-5 dBu
At Maximum Input Gain	
5201VS, 5201VS-8, 5101VS, 5101VS-8	+2 dBu
5251VS, 5151VS	-31 dBu
4. Input Impedance (20 Hz - 20 kHz, balanced)	
5201VS, 5201VS-8, 5101VS, 5101VS-8	10 M in parallel with 1000 pF
5251VS, 5151VS	12 k Ω , \pm 5%
5. Maximum Output Attenuation	>90 dB
6. Maximum Output Level	
5201VS, 5101VS, 5251VS, 5151VS	+24 dBu, min
$R_L \geq 600 \Omega$	
5201VS-8, 5101VS-8	+8 VRMS. Min
$R_L \geq 8 \Omega$	
7. Output Impedance	
5201VS, 5101VS, 5251VS, 5151VS.	<0.5 Ω
20 Hz - 20 kHz, Balanced and Floating	
5201VS-8, 5101VS-8	<0.5 Ω
20 Hz - 20 kHz	
8. Frequency Response	\pm 0.5 dB
20 Hz - 20 kHz	
9. Total Harmonic Distortion, THD	
5201VS, 5101VS 5251VS 5151VS	<.02%
+24 dBu, 20 Hz - 20 kHz	
5201VS-8, 5101VS-8X.	<.3%
+24 dBu, 20 Hz - 20 kHz	
10. Intermodulation Distortion, IMD	
5201VS, 5101VS, 5251VS, 5151VS	<.01%
+24 dBu, 60 Hz/7 kHz	
5201VS-8, 5101VS-8	<.3%
8 W, $R_L=8 \Omega$, 60 Hz/7 kHz	

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11. Signal-to Noise Ratio, S/N	
5201VS, 5101VS	>95 dB
Unity Gain, referred to +4 dBu, 22 Hz - 22 kHz filters	
5201VS-8, 5101VS-8	>95 dB
Below 8 W reference, 16 dB gain, 22 Hz - 22 kHz filters	
5251VS, 5151VS	>76 dB
Unity Gain, referred to +4 dBu, 22 Hz - 22 kHz filters	
12. Common Mode Rejection Ratio, CMRR	
5201VS, 5201VS-8, 5101VS, 5101VS-8	>60 dB
20 Hz - 20 kHz	
5251VS, 5151VS	>80 dB
20 Hz - 20 kHz	
13. Voltage Controlled Amplifier (VCA) Control Characteristics	
0 dB point	0.5 V, max
16 dB point	2.5 V, typ
20 dB point	3.47 V, $\pm 5\%$
Full Mute (>70 dB)	4.5 V, min
Control Terminal Open	Unity Gain
14. Switch Control Characteristics	
5201VS, 5201VS-8, 5251VS, 5101VS, 5101VS-8, 5151VS	
Switch Control Terminal Open	Channel OFF
Switch Control Terminal Grounded	Channel ON
15. Power Requirements	
Supply Voltage	± 15 V
Typical Current Drain	
5201VS	74 mA
5201VS-8	76 mA
5251VS	78 mA
5101VS	56 mA
5101VS-8	58 mA
5151VS	58 mA
16. DC Voltage Short Circuit Protection	
5201VS, 5101VS, 5251VS, 5151VS	Thermistor (Self Resetting)
5201VS-8, 5101VS-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	
5201VS	(331 gm) 0.73lb
5201VS-8	(313 gm) 0.69lb
5251VS	(327 gm) 0.72lb
5101VS	(227 gm) 0.50lb
5101VS-8	(209 gm) 0.46lb
5151VS	(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



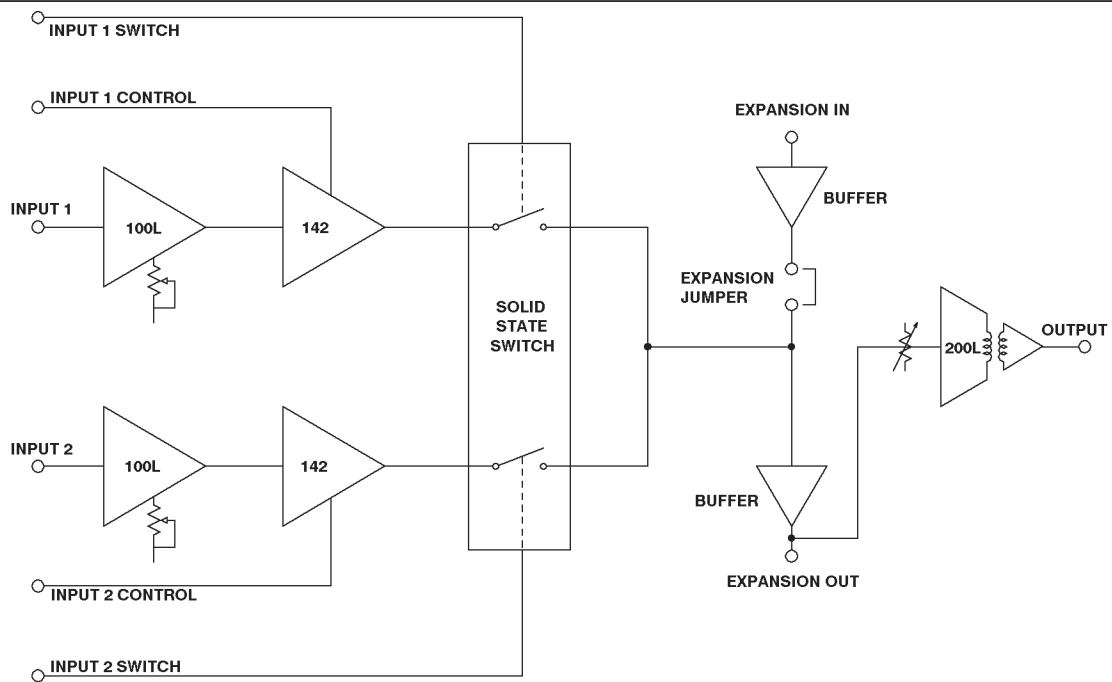


Figure 1 - 5201VS Block Diagram

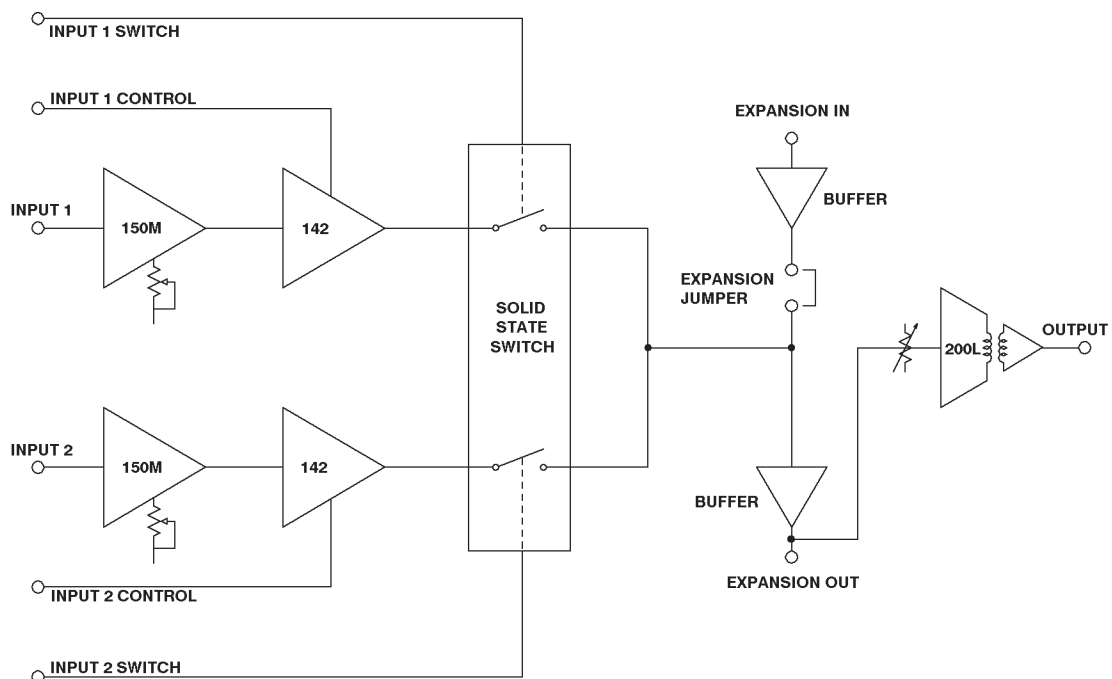


Figure 2 - 5251VS Block Diagram

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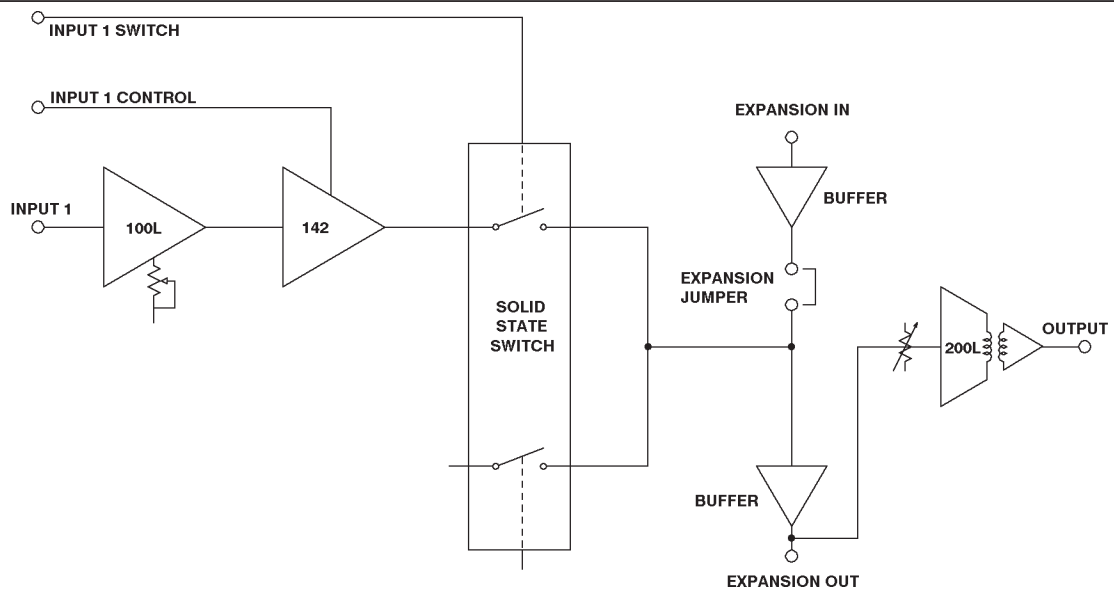


Figure 3 - 5101VS Block Diagram

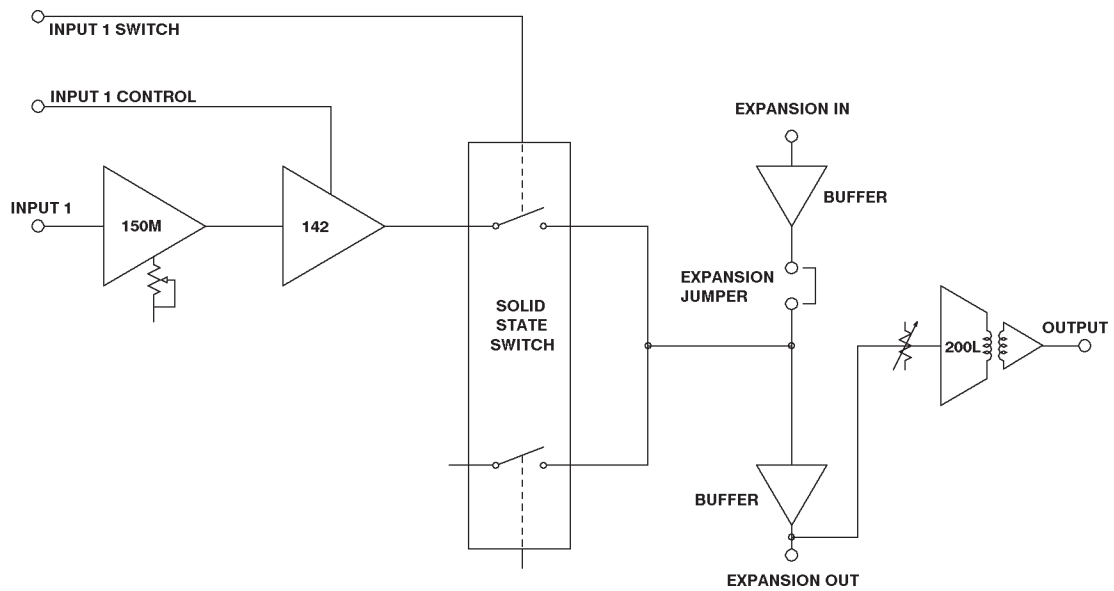


Figure 4 - 5151VS Block Diagram



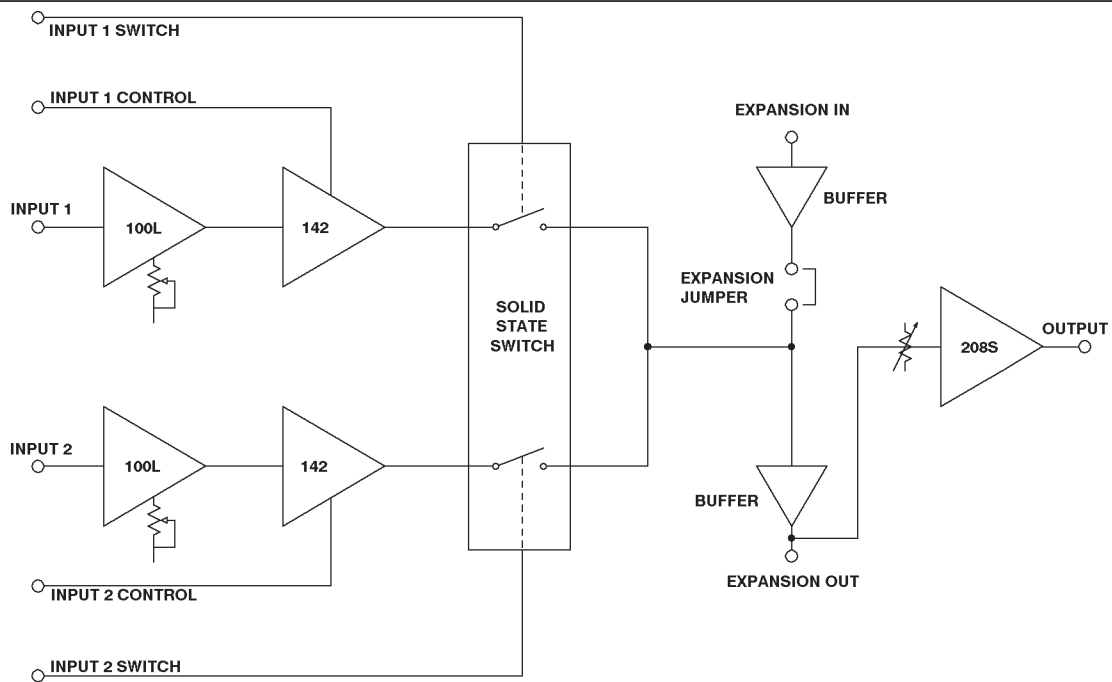


Figure 5 - 5201VS-8 Block Diagram

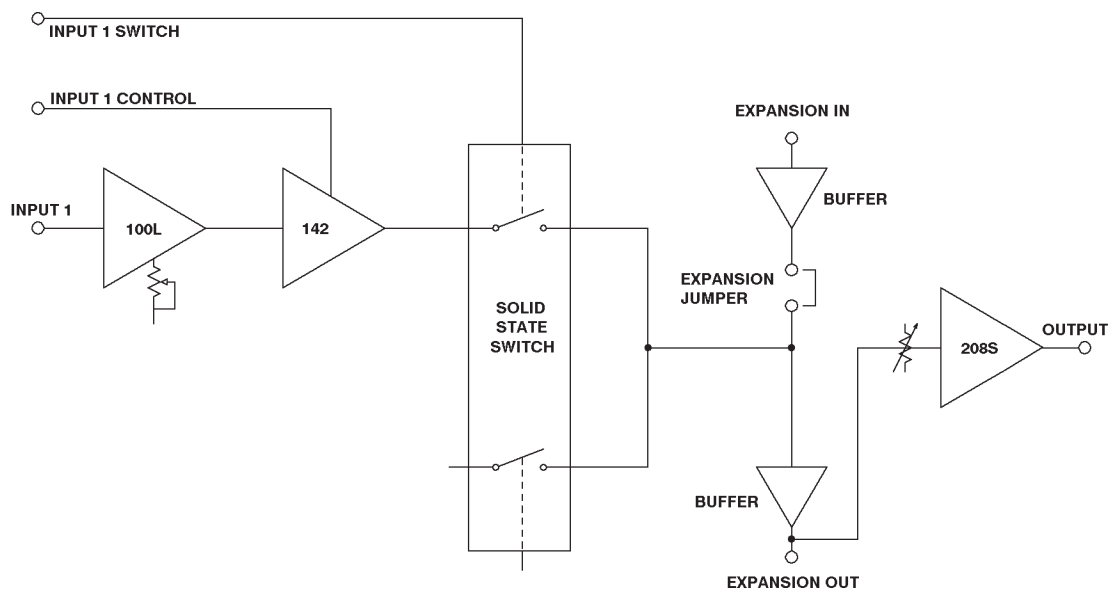


Figure 6 - 5101VS-8 Block Diagram

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