5202, 5252, 5202M, 5202-8

TWO CHANNEL AMPLIFIER CARDS

DESCRIPTION

The 5202M subgroup of the 5000 Series Audio Processing System consists of 4 cards as described in Table 1 below. Each card has two independent channels, each having a balanced input and a balanced, floating output. In addition, cards having model numbers with an “M” suffix have a third balanced, floating output which is a mix of the two channel inputs.

MODEL	NUMBER OF INPUTS	INPUT LEVEL	NUMBER OF OUTPUTS	OUTPUT LEVEL
5202	2	Line	2	Line
5252	2	Microphone	2	Line
5202M	2	Line	3	Line
5202-8	2	Line	2	Speaker

Table 1 - Model Descriptions

Expansion inputs and outputs which are used for adding extra inputs and outputs, respectively, are available on the “M” sufix models only. The expansion input is brought in via the mother board from the card in the next slot to the left (as seen from the front) in the 5032 Mainframe. When expansion in is used, it goes to the third 200L, or to the expansion output, depending upon the position of the Expansion Out jumper. This allows the two normal inputs to remain isolated to their normal outputs, but also to mix together to the third output, or to the expansion output. The expansion the output is not available externally. It is routed, via the mother board, to the expansion input of the card located in the next slot to the right (as seen from the front) in the 5032 Mainframe. When the expansion output is selected by placing the Expansion Out jumper in the expansion position, the third (mixed) output is not active.

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. The 5202, 5252, and 5202M use Model 200L Active Output Modules, with balanced floating outputs, as drivers for the external loads.The 5202-8 uses two 208S 8 W amplifier modules to drive speaker loads.

SPECIFICATIONS

ELECTRICAL

1. Maximum Gain
   - 5202, 5202M . . . . . 24 dB
   - 5252 . . . . . 57 dB
   - 5202-8 . . . . . 34 dB
2. Input Gain Range
   - 5202, 5202M, 5202-8 . . . . . –2 dB - +18 dB
   - 5252 . . . . . +26 dB - +51 dB
3. Maximum Input Level
   - At Minimum Input Gain
     - 5202, 5202M, 5202-8 . . . . . +22 dBu
     - 5252 . . . . . –5 dBu
   - At Maximum Input Gain
     - 5202, 5202M, 5202-8 . . . . . +2 dBu
     - 5252 . . . . . –31 dBu
4. Input Impedance (20 Hz - 20 kHz, Balanced)
   - 5202, 5202M, 5202-8 . . . . . 10 MΩ in parallel with 1000 pF
   - 5252 . . . . . 12 kΩ, ±5%
5. Maximum Output Attenuation . . . . . >90 dB
6. Maximum Output Level . . . . . +24 dBu, min
   $R_L \geq 600\ \Omega$
7. Output Impedance . . . . . <0.5 Ω
   20 Hz – 20 kHz, Balanced and Floating
8. Frequency Response . . . . . ±0.5 dB
   20 Hz - 20 kHz
9. Total Harmonic Distortion, THD . . . . . <.02%
   20 Hz - 20 kHz, +24 dBu
10. Intermodulation Distortion, IMD . . . . . <.01%
    60 Hz/7 kHz
11. Signal-to Noise Ratio, S/N
    - 5202, 5202M, 5202-8 . . . . . >95 dB
      Unity Gain, referred to +4 dBu, 22 Hz - 22 kHz filters
    - 5252 . . . . . >76 dB
      Gain = 54 dB, referred to +4 dBu, 22 Hz - 22 kHz filters
12. Common Mode Rejection Ratio, CMRR
    - 5202, 5202M, 5202-8 . . . . . >60 dB
      20 Hz - 20 kHz
    - 5252 . . . . . >80 dB
      20 Hz - 20 kHz

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com

13. Power Requirements
    - Supply Voltage . . . . . ±15 V
    - Typical Current Drain
      - 5202 . . . . . 52 mA
      - 5202M . . . . . 78 mA
      - 5252 . . . . . 58 mA
      - 5202-8 . . . . . 1.4 A

14. DC Voltage Short Circuit Protection
    - 5202, 5202M, 5252, 5202-8 . . . . . Thermistor (Self Resetting)

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
   - 5202 . . . . . (218 gm) 0.48lb
   - 5252 . . . . . (227 gm) 0.50lb
   - 5202M . . . . . (163 gm) 0.36lb
   - 5202-8 . . . . . (200 gm) 0.44lb

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

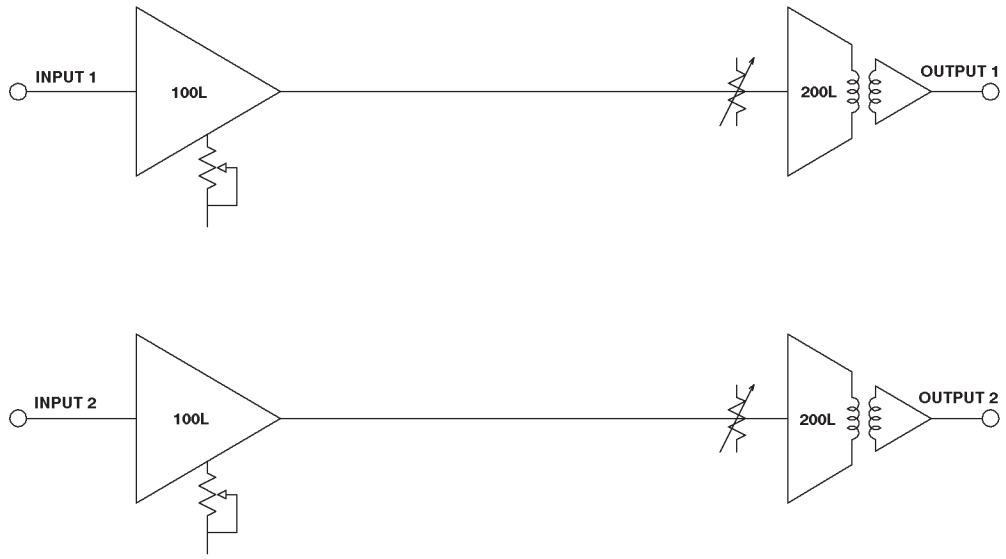

Figure 1 - 5202 Block Diagram

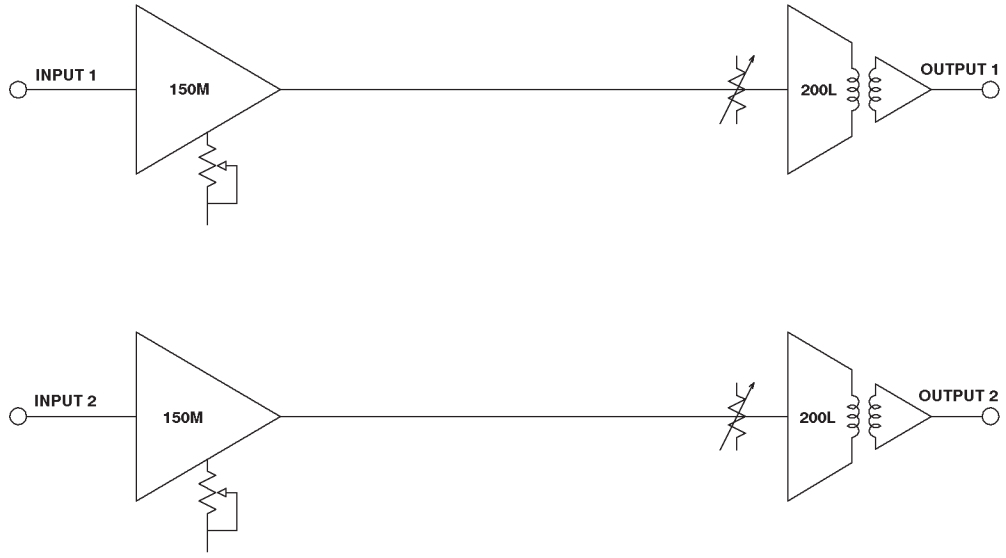

Figure 2 - 5252 Block Diagram

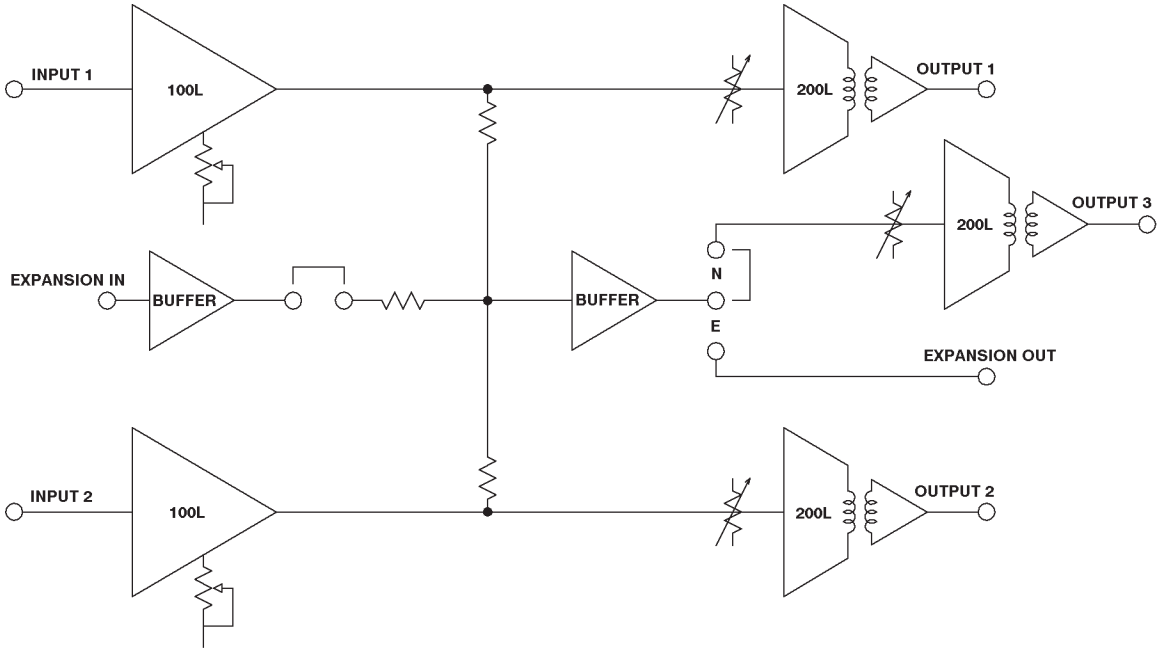

Figure 3 - 5202M Block Diagram

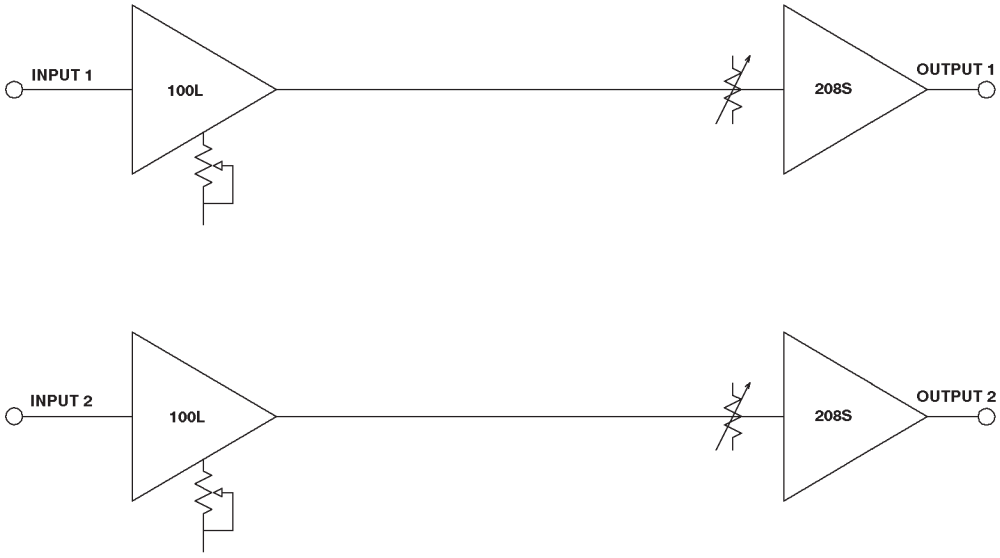

Figure 4 - 5202-8 Block Diagram

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