



from binary counters (IC4 & IC5)

Resistor values for RL, RR = 10k

- 1 dB	R1 = 1.087491 k	R2 = 81.954816 k
- 2 dB	R3 = 2.056718 k	R4 = 38.621161 k
- 4 dB	R5 = 3.690427 k	R6 = 17.097139 k
- 8 dB	R7 = 6.018928 k	R8 = 6.614253 k
- 16 dB	R9 = 8.415107 k	R10 = 1.883390 k
- 32 dB	R11 = 9.748811 k	R12 = 0.257661 k

For other RL, RR values, multiply all resistors by same factor (e.g. x2 for 20 k)

Contacts shown in de-energised position (- 63 dB attenuation)

FORMULAS: $-dB = 20 \log A$

$$A = 10^{(-dB/20)}$$

$$A = U2/U1$$

$$R1 = (1 - A) \times RL$$

$$R2 = (A \times RL) / (1 - A)$$

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TITLE: attenuator relays

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1

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Sheet: 1/1