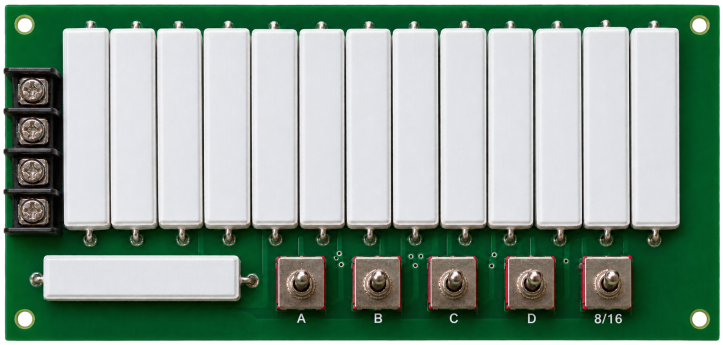
FASTLANE AUDIO

R-ATT Resistive Attenuator

PROTOTYPE ATTENUATION TEST | NOVEMBER 8, 2026



Retouched illustration; resistor markings removed.

Nominal 3-18 dB adjustment in 1 dB steps.
Four switches insert resistor stages. A separate selector matches an 8 or 16 ohm driver. All intended steps operated in the initial bench check.

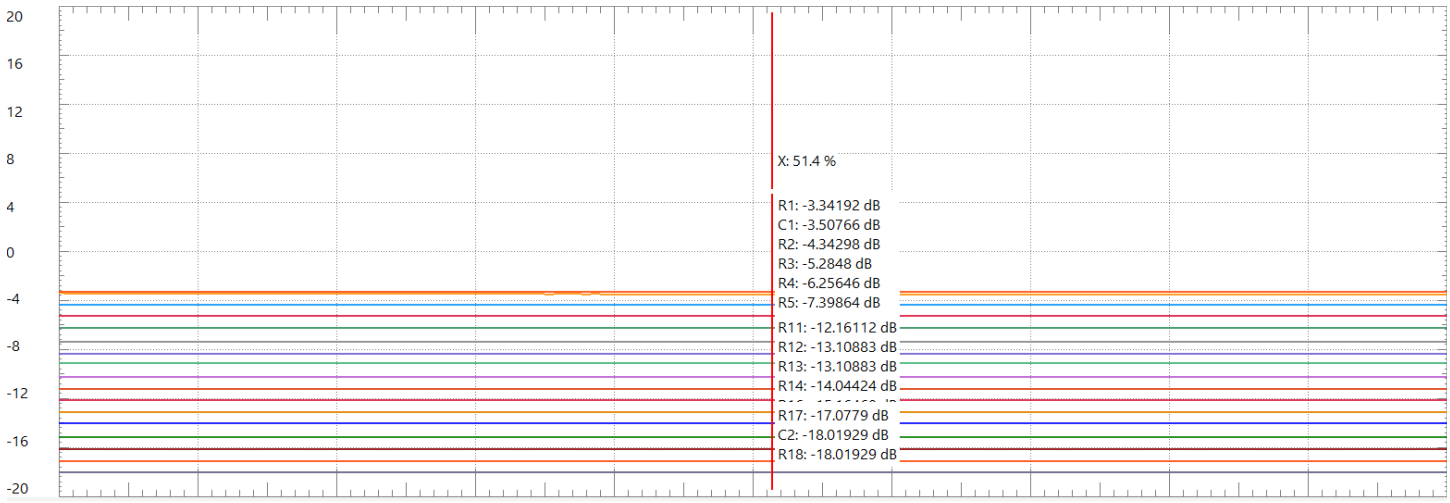
Test setup
Analog Discovery 3 / WaveForms, 1 kHz sine, 0 V offset, 8 ohm mode. Dummy load measured 7.7 ohms. C1 measures input; C2 measures output.

MEASURED SPOT-CHECKS

Target	Switches ON	Drive amplitude	Measured loss	Error from target
3 dB	None	100 mV peak	3.28 dB	+0.28 dB
5 dB	B	100 mV peak	5.04 dB	+0.04 dB
18 dB	A + B + C + D	200 mV peak	17.76 dB	-0.24 dB

Measured loss = C1 minus C2. The additional 18 dB check at 100 mV measured 17.95 dB. Below is the original multi-position capture at 1 V drive; its raw traces include source-level effects and repeated saved references. The lower-drive spot-checks above provide corrected input-to-output results. Measurement uncertainty has not been established.

MULTI-POSITION CAPTURE / NOMINAL 3-18 dB RANGE



SWITCH LEGEND

OFF bypasses a stage. ON adds A = 1 dB, B = 2 dB, C = 4 dB, D = 8 dB to the 3 dB base. All switches not listed below are OFF. Use the PCB OFF marking; confirm lever direction on the actual switch.

Target	Switches ON
3 / 4 dB	None / A
5 / 6 dB	B / A+B
7 / 8 dB	C / A+C
9 / 10 dB	B+C / A+B+C

Target	Switches ON
11 / 12 dB	D / A+D
13 / 14 dB	B+D / A+B+D
15 / 16 dB	C+D / A+C+D
17 / 18 dB*	B+C+D / A+B+C+D

*Additional combinations beyond the original 3-16 dB chart. Select load mode to match the driver. Change settings with amplifier power off. These checks establish attenuation at 1 kHz; frequency response, continuous power and long-term switch reliability remain to be tested.