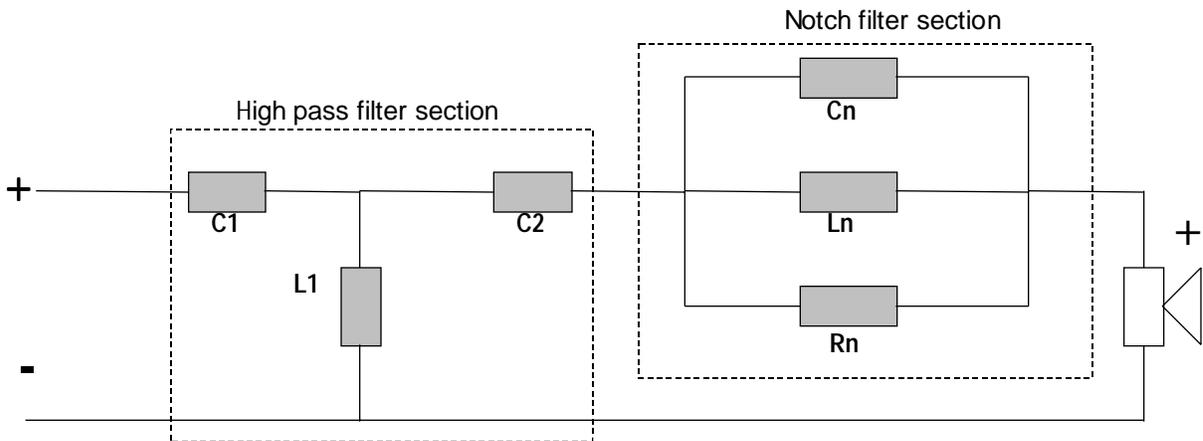


## Recommended passive crossover schematics for BG Corp. planar- magnetic transducers

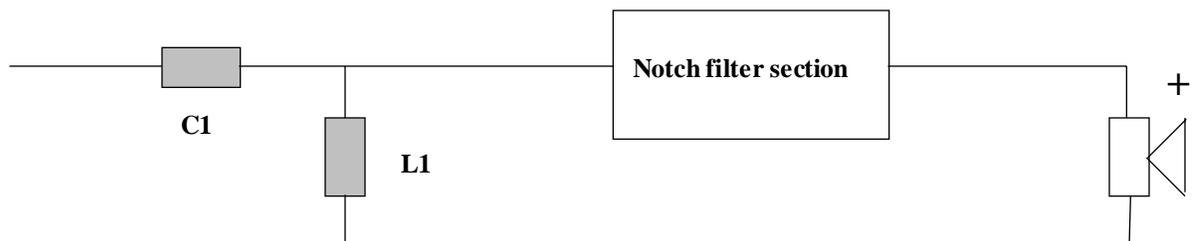
The RD Series planar transducers generally can be used with two types of crossover networks:

1) Crossover recommendation for applications where RD drivers are NOT used at their maximum power capacity but primarily at sustained moderate levels. High pass filter with 150Hz cut-off frequency (minimum 18dB/oct. slope) and notch filter. In cases where 150 Hz crossover point and high SPL levels are required, a fourth order high pass filter is recommended. Schematic and component values for 3rd order filter are given below.



Transducer	C1,	C2,	L1	Cn	Ln	Rn
RD75	130	390	4.4	20	0.05	10
RD50	210	620	2.7	20	0.05	8
RD 40	270	820	2.1	20	0.05	7
RD 28.1	200	590	2.9	20	0.05	4.7

2) Crossover recommendation for applications where RD drivers are used at their maximum power capacity for sustained levels or in very large rooms. High pass filter with 300 Hz cut off frequency (minimum 12dB/oct. slope) and notch filter. Schematic and component values are given below. Notch filter schematic and values are the same as above.



**C1= 125  $\mu$ F, L1=2.3mH, 18 AWG minimum.**

### NOTES:

These crossovers are given only as guidelines. A designer is free to use any other reasonable approach.

All capacitor values are in microfarads, all inductor values are in mH, all resistor values are in ohms, nominal power rating is 10W.

All C1 and C2 are non-polar capacitors with at least 100V rating. All Cn caps are polypropylene capacitors with 250VDC rating.

All RD drivers exhibit a frontal cavity resonance naturally inherent due to a magnet structure in front of the diaphragm. Notch filter provides compensation of this resonance yielding smooth frequency response.

For better reproduction of very high frequency signals C1 and C2 can be assembled from multiple non-polar capacitors and bypassed with high quality polypropylene capacitors of a small value (0.47  $\mu$ F– 1 $\mu$ F).