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DAMPING FACTOR: *Always try to keep speaker cables as short as possible and select cable models that offer a higher damping factor; 20-50 for music (i.e. concert sound) and 10-20 for speech (i.e. sport stadiums).*

The greater the damping factor (DF), the better the ability to control speaker excursion to create sharp, clear quality in the low end frequency range.

$$\text{Damping Factor} = \frac{\text{speaker impedance}}{\text{power amp. output impedance} + \text{speaker cable cond. resistance}}$$

As the formula to the left shows, a higher conductor resistance causes a lower damping factor, which prevents even top quality power amps from performing at peak optimum levels.

Values calculated assuming power amplifier output at 0.05Ω

Model	Pair cond. resist. (Ω/100m) & cross-sec (mm²)	Cond. resist. (Ω/100m) for return path	Cable length/damping factor DF=20	DF=50
4S6	1.87/1.0mm² AWG 17	3.7	9.5m	3.0m
4S8	0.75/2.5mm² AWG 14	1.5	23.3	7.3
4S11	0.43/4.3mm² AWG 11	0.87	40.2	12.6

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