# Guideline how to set active DSP X-Over Starting-Point Settings with GermanMAESTRO Car Speaker Systems for active application

GERMAN MAESTRO
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Applicable with M-Line <u>MS 654010</u>

Standard setting – mirroring systems' frequency curves as fired by its specific GermanMAESTRO passive x-over

Preliminary note:

> This recommendation for active DSP x-over settings provides a SPL frequency curve similarly to application with the German-MAESTRO passive x-over at 0° speakers' standard position to the listeners' ears.

> Use these settings as your starting point to adjust now the speaker system's x-over settings towards best sound performance achievements according the specific needs resulting from the speakers installation environment.

3-way System

Q = 0.5 Typical Linkwitz-Riley
Q = 0.7 Typical Butterworth
Q = 1.0 Typical Tschebyscheff
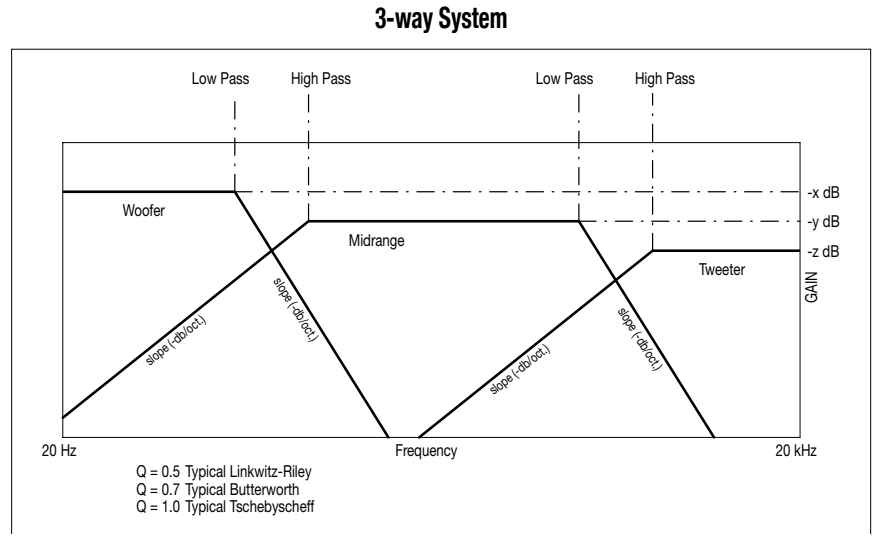
Woofer					Midrange								Tweeter				
Low Pass (Hz)	Q	Slope (-dB/oct.)	Gain (dB)	Phase (degree)	High Pass (Hz)	Q	Slope (-dB/oct.)	Low Pass (Hz)	Q	Slope (-dB/oct.)	Gain (dB)	Phase (degree)	High Pass (Hz)	Q	Slope (-dB/oct.)	Gain (dB)	Phase (degree)
150	1	12	0	180	300 - 200	0,7	12	1.700	0,7	12	0	0	3.700	0,7	12	-1,5	0

M-Line Tweeter MT 40 WS

Frequency response/harmonic distortion relation:

> This scheme shows the MT 40 WS tweeters' harmonic distortion behaviour related to its frequency response. The 1% harmonic distortion point is at 1,3 KHz.

> To avoid any serious damages on tweeters, please be always aware that with selected settings of tweeters' frequency- and slope x-over points below 1.600 Hz. the tweeters' applied SPL power-load has to be lowered in an appropriate manner.