

Design procedure with “acourate”, 3-way dipole xo:

Generate for instance a Neville-Thiele 1 order 48khz Linear Phase 3-way filter xo 70-350hz 131072 taps. It will generate six files named XO1L48, XO1R48 XO3 R48.dbl

Choose requested samplerate – 48khz

Woofers:

- Curve 1: Import – Crossover-XO1L48 – Neville-Thiele 1 Order -70 Hz linear phase.
- Curve 2: Generate - IIR - lowshelf 22Hz Q0.45 G19.
- Combine Curve1+2 to Curve1 with F8-Key
- Delete Curve 2
- TD-Functions - Gain -14 dB
- TD-Functions - CutNWindow 131072 start pos 0 “remove dc”
- Save as Woofers XO

Mid:

- Curve 1: Import – Crossover-XO2L48 – Neville-Thiele 1 Order 70-350Hz linear phase.
- Curve 2: Generate - IIR - lowshelf 75 Hz, Q0.6 G14. Combine Curve1+2 to Curve1 with F8-Key
- Delete Curve 2
- Curve 2: Generate - IIR - lowshelf 125 Hz, Q0.6 G5. Combine Curve1+2 to Curve1 with F8-Key
- Delete Curve 2
- TD-Functions - Gain -21 dB
- TD-Functions - CutNWindow 131072 start pos 0 “remove dc”
- Save as Mid XO

High:

- Curve 1: Import – Crossover-XO3L48 – Neville-Thiele 1 Order -350Hz linear phase..
- TD-Functions - Gain -11 dB
- TD-Functions - CutNWindow 131072 start pos 0 “remove dc”
- save as High XO

No amplitude value should be above -0db when done

Store woofers-mid-high xo accordingly:

XO1L48 XO1R48 XO3 R48.dbl It will replace the original XO files.

This procedure will add a “latency” in the resulting filter, midbass will end up 24 samples behind the tweeter and subs will be 142 samples behind the tweeter. Correct for that by TD-function / rotation.

Save “multiway filter wav” under file menu, choose XO1L48.dbl and save wav as “log sweep” or whatever.