**APPLICATIONS**

- 12" woofer for enclosures of 60 to 140 litres for 3, 4, and 5-way systems
- PHA cone allows midrange from 800 Hz transmission line
- Bass reflex sealed or aperture damped enclosures

**FEATURES**

- Magnesium die cast baffle with aerodynamic ribs
- Very high power handling
- Vented long throw magnet system
- New hallowoof technique
- PHA cone material (phase homogeneous area)
- DTL system (dynamic transient linearity)
- Tropec proof
- High BL factor

When the old 30W-54 came out some years ago it soon got famous to be the best 12" woofer for high end high fidelity systems. Now we have improved some important specifications. Making the cones now in our own plant of special polymer/alloy mixture the frequency response runs straight giving an even higher definition of complex music. The new long throw magnet system allows cone displacement of 1" (25 mm) so it can be used even in transmission line systems. The proven basket with the aerodynamic ribs integrates the complete vented magnet system. The hollowoof technique allows high power handling and the DTL-system reduces the rise time by the factor 10!

The STEP FUNCTION of a 12" woofer normally has a slow rise, not much steeper than the dropping due to the heavy weight of the speaker. The step function to the right shows the efficiency of our DTL system. The rise time is reduced to 1/10. The copper capsule around the pole piece is extended and acts as a magnetic short circuit to the voice coil. The iron in the pole piece normally creates unbalances to the voice coil which now is eliminated.

Tone bursts are the best way to obtain an accurate picture of overall acoustic performance. Regrettably they are mostly used only to test rise-time and ringing - which shows much more clearly with a step function test! With a tone burst, all the moving parts of a speaker can be loaded without burning the voice coil. With a given frequency the SPL should be 30dB higher at 1000 W input when compared with a 1 W input, if the output is linear. This test shows the driver's ability to reproduce the transients without compression. The right picture shows that even a 1000 W input is not the limit: the dynamic response is absolutely linear. Data given in catalogues (and even test reports) normally are calculated figures and not measured values.

This compression effect is either under-rated or ignored very often. That is why many speakers do not produce SPL's above 100 dB, in spite of higher theoretical specifications. However this test exposes such anomalies between calculations and actual measurements.