Tuning-Capture

Tuning-Capture is a measurement software for loud-speaker system tuning derived from the Room-Capture. Tuning-Capture uses time-domain chirp. Tuning-Capture is low cost, intuitive software; fulfil the entrance level needs, but still ultra high resolution.

Tuning-Capture is ideal for room tuning and sound reinforcement system optimization. A range of newly developed analyzing tools provides fast and accurate tuning information; delay-finder with group-delay and Cepstrum analysis, filter optimization, sound level metering with histogram etc.

Much effort is put in the new user interface to reduce the need for dialog boxes and spin-boxes. These are replaced with modern mouse wheel and grab 'n' drag mouse based and controls. For example if you need to change the range of a graph, this is now done with the mouse wheel. Dragging the scale zoom it.

X-over aligner
This is the quick way to fine-tune the levels and delay between bands in a multi-way active system.

The X-over Aligner offers an intuitive graphical aid for delay alignment with synchronized time and frequency graphs. A range of useful curves can be displayed such as Impulse response, ETC or Cepstrum in the time domain. In the frequency domain both group-delay and wrapped phase can be chosen, depending on the preferred alignment strategy. The X-over Aligner also offers two automatic delay finder algorithms.

MultiWin
Sophisticated windowing functions allow the user to window out room reflections and focus on either equalizing the direct sound while retaining low frequency resolution or spatial averaging of the room transfer function.

Pseudo Averaging
Tuning-Capture also supports Pseudo Power Averaging, which recreates an average of the time response. PPA allows the user to perform a series of measurements throughout the coverage pattern of the sound reinforcement system and base system EQ on the weighted, spatially-averaged response.

Equalizer simulator
Any captured transfer function can be used in the equalizer simulator. EQ parameters can be manually tuned using a convenient graphical user interface and the complex sum can easily be tuned to fit the target response. A list of created filters can be transferred to a DSP device or the resulting filters can be listened to or used as stimulus EQ.
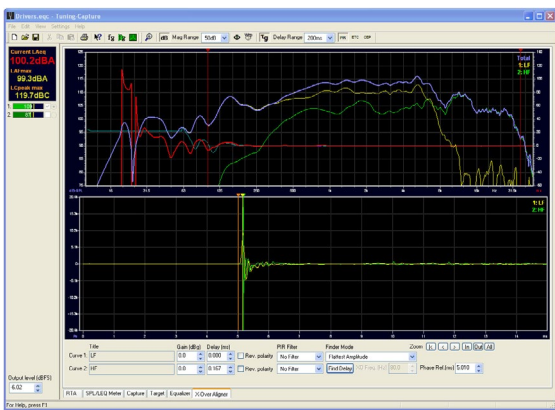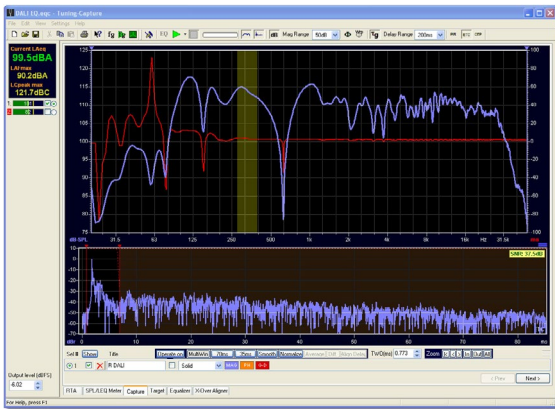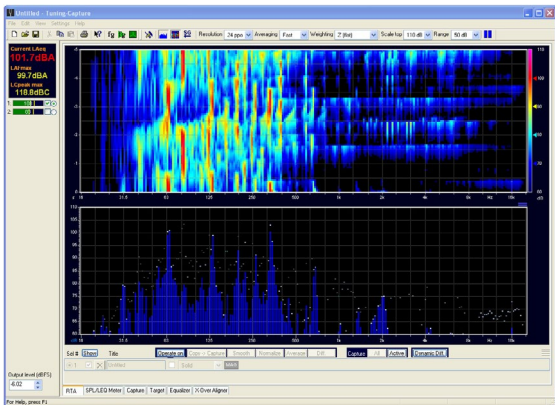
Listen to filters

You can use your PC's multimedia core to run up to 256 parametric filters or any biquads (shelving, x-over filters, allpass etc.) through your soundcard. You can listen to .WAV files from your hard-drive or assign an input of the soundcard to feed the filters with any program material. You can measure with the filters applied on the stimulus, so you can check your filter setup on and off axis for example.

RTA and Spectrograph

Choice of both the fast FFT fractional octave RTA and the more accurate band pass RTA. RTA and Spectrograph are running in the same window with 1/1 to 1/48 octave resolution.
A novel Dynamic Difference RTA shows the power transfer function between the channels.

SPL and LEQ Meter

SPL metering according to IEC 61672 standard.
Built-in weighting filters: A, C, AU and Z (flat)
Selectable time response; Slow (1s) / Fast (0.125s)
Instantaneous SPL Metering (RMS and Peak)
Five different Equivalent Continuous SPL, Leq, are calculated simultaneously; Continuous, Current, Two Short time (User defined time) and Remaining Leq
Histogram for the short time Leq

Benefits

· PC-based loudspeaker or sound reinforcement system measurements
· Convenient, powerful measurement and optimization tool for the sound reinforcement system installer
· Multiple measurements can be taken at several measurement locations and averaged
· Parametric equalizer simulator. Listen to the defined filters
· X-Over alignment tab where you can find the delay needed to align subs with full-range speakers
· Filter parameters can be edited graphically

Features

· Acquires complex frequency response
· Log Sine Sweep (Chirp)
· Import text-files from Audio-Capture, Clio, MLSSA (frequency and impulse response)
· Variety of output formats for direct transfer to most common digital loudspeaker processors
· Built-in frequency response and microphone compensator
· Support for any full duplex stereo soundcard or multi-channel soundcard
· RTA and Spectrograph with up to 48 points per octave
· SPL and Leq Meter with histogram and remaining Leq display
· Spectrum Analyzer with distortion analyzer
· Function Generator

Requirements

· PC with XP SP2 or Vista SP2 or Win7 or Win8; 32 or 64 bits
· CPU: Intel i3 or better. Two or more cores
· RAM: 2 GB min, 4 GB or more is recommended for 64 bits
· Display: minimum 1280 x 800 pixels.
· Soundcard: Windows compatible (Wave/WDM or ASIO) with stereo inputs and outputs, 16-bit/44.1k to 24bit/96k sampling, with full duplex (simultaneous play and record) capability

WaveCapture
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a Bävholm/ Grenander Mission

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