

APL TDA

Software Installation and Quick Start Guide v.1.1



Well come to TDA!

Installation

To run APL TDA software demo or commercial version, you must have Matlab Compiler Runtime (MCR) environment installed on your Windows based PC.

MCR is available here: <http://www.mathworks.se/products/compiler/mcr/>

You must choose R2013a(8.1) 32 or 64 bit version depending on your Windows system version. You must choose respective, 32 or 64 bit, APL TDA installer, also.

Note: You may install APL TDA software to any folder on your hard drive, but there is a known issue where Windows 7 (depending on user access right settings) doesn't always allow APL TDA software to write on system partition(usually c:\).

Activation

You can start use of ATL TDA demo version instantly after installation but a commercial version can be used only after the activation process. You must send "APL_TDA_siteID.txt" file, which you will find in the installation directory after first start of APL TDA software (next to APL_TDA_***.exe), to act@aplaudio.com. You will receive a license file "APL_TDA_LIC.txt" in e-mail. Please copy this file into APL TDA software installation directory (next to „APL_TDA_***.exe" and „APL_TDA_siteID.txt"). TDA software is now activated and fully functional.

Basic Instructions

You must setup your PC sound card and measurement microphone as usually for audio measurements. The sound card output must be connected to a loudspeaker system under test (you can play music from PC) and microphone must be connected to the respective sound card input (you can record mic signal on PC). Usually, this input must be equipped with +48V phantom power for microphone. Please, do not forget to switch it on.

Run APL TDA software. It takes some time to upload software to PC memory and initialize it. Please be little patient. After you see first software screen you must find your sound card input and output listed in „Available sound devices" list. Please, input the sound card input and output ID numbers into respective fields "Input device ID" and "Output device ID". Select soundcard output channel and output level in field "Output". Select soundcard input channel in field "Input". Select 48 kHz sample rate in field "Sample rate" if your sound card does not support the default 96 kHz sample rate. Click the button "Run measurement".

After a few seconds you must hear a sweep tone from your loudspeaker, then see a recorded microphone signal and after that a 3D picture representing delays in your loudspeaker.

You can now click on buttons in the field of “Display”:

“recorded” – to see signal wave form of recorded microphone signal;

“IR” – to see impulse response of your loudspeaker;

“IR Log” – to see impulse response of your loudspeaker in logarithmic scale;

“TDA 3D” – to see delay graph in 3D isometric;

“TDA pl” – to see delay graph straight from above, to read time values more easily;

“AFR” – to see Amplitude Frequency Response of your loudspeaker;

“DFR” – to see Delay Frequency Response of your loudspeaker;

If you check the checkbox “SW”, any of previous listed buttons will open respective graph in a separate window allowing to save, modify graphs and read graph values by use of cursor. Such separate windows will stay open till you close them yourself.

By use of field “Time span” you can change time axes span of “TDA 3D” and “TDA pl” graphs.

Sometimes, the TDA software incorrectly finds time zero point (especially when measuring just a subwoofer). In such a case, it is possible to change time scale zero by use of field “time zero”. By use of drop down box “first graph to show”, you can choose which graph is shown immediately after calculations are done. The button “Show graphs” will open all graphs in separate windows. The button “Close graphs” will close all graphs. By use of button “imp IR” you can process a previously recorded impulse response. By use of button “imp rec” you can process a previously recorded test signal. By use of button “save IR” you can save an impulse response of the current measurement. By use of button “save data” you can save measurement output data in text file table containing 3 columns – frequency, delay time (ms) and amplitude (dB).

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