Application of WinAudioMLS for quality and production tests

WinAudioMLS offers a wide range of measurement capabilities that make this measurement system ideal for production tests. In addition, WinAudioMLS includes special functions to optimize different levels of production tests.

We divide production test setups into the following groups depending on the level of user interaction

- Full automatic tests with minimum user action. Test run is completely predefined. Measurement reports are automatically written.
- Semi automatic test. Tester runs different test scripts
- Manual test. Tester runs specialized measurement functions manually.
- Debugging: Analysis of defective devices

WinAudioMLS covers all these groups.

We offer the following features for production test applications:

- All standard audio quality parameters are supported (THD,THD+N etc.)
- Large set of measurement functions
- High dynamic tests (192kHz/24bit) available
- Multi channel test up to 64 channels
- Large pass/fail info
- Parameter viewer with large digits to monitor parameters
- Limits for certain parameters e.g. THD,THD+N, frequency response, sensitivity etc
- Dynamic overlays
- Automatic report (.html) generation
- Long term testing
- Logging of test results
- Script interface to control WinAudioMLS from other applications
- Fast test execution
- Arbitrary filters to remove frequency ranges
- Custom logo integration
- Custom graphical user interface

For production tests applications we emphasize:

- Reliable recognition of defective units
- Fast test execution
- Automatic logging of test results
- Simplified custom designed user interface for less training effort

Below we explain some of the special features of WinAudioMLS. For details please refer to the user manual or contact us directly.

Parameter Viewer

The ParamViewer shows different measurement results in separate windows. This feature is specially designed for technical labs and productions tests, where you have to recognize measurement results fast and easy. You can define a threshold for each parameter. This makes violations of user defined values easily visible.

The ParamViewer shows the value in an alphanumeric form and as a bar graph meter. Each ParamViewer has a rich set of configurations to fit to your needs. The windows are freely placable on the entire desktop and scalable.
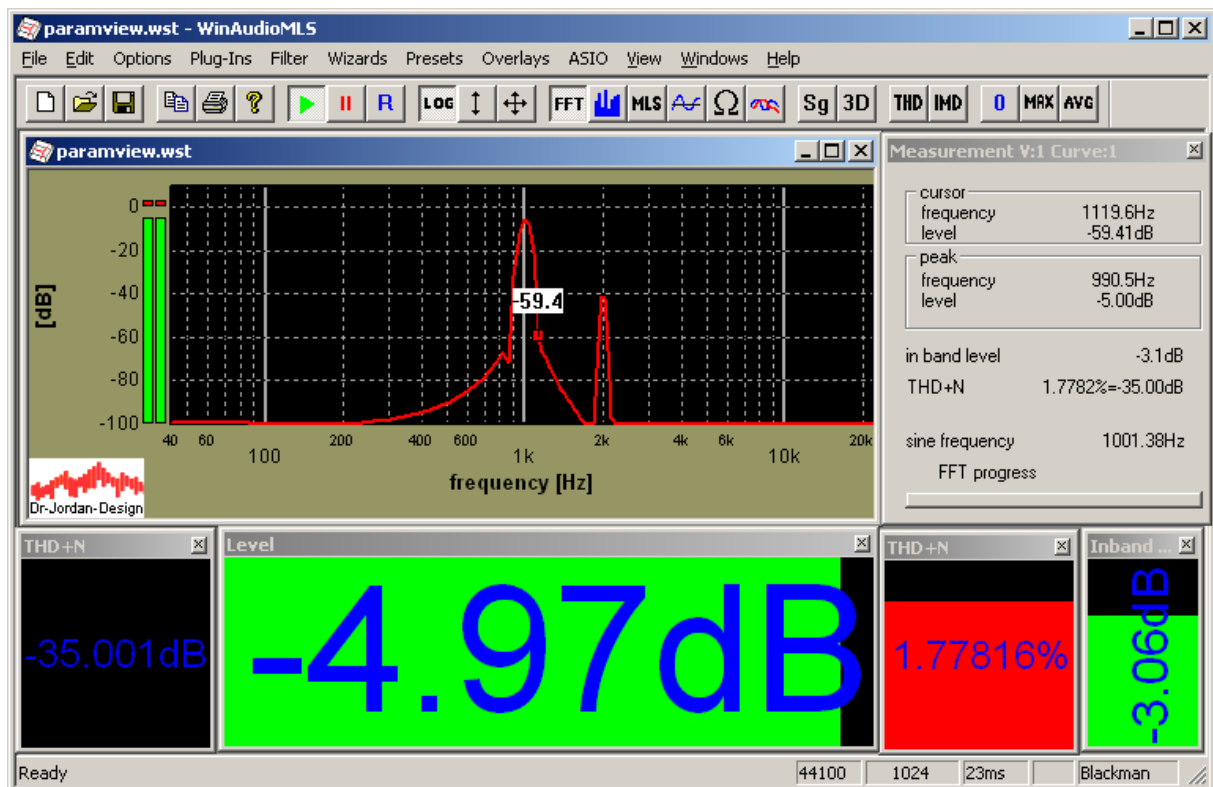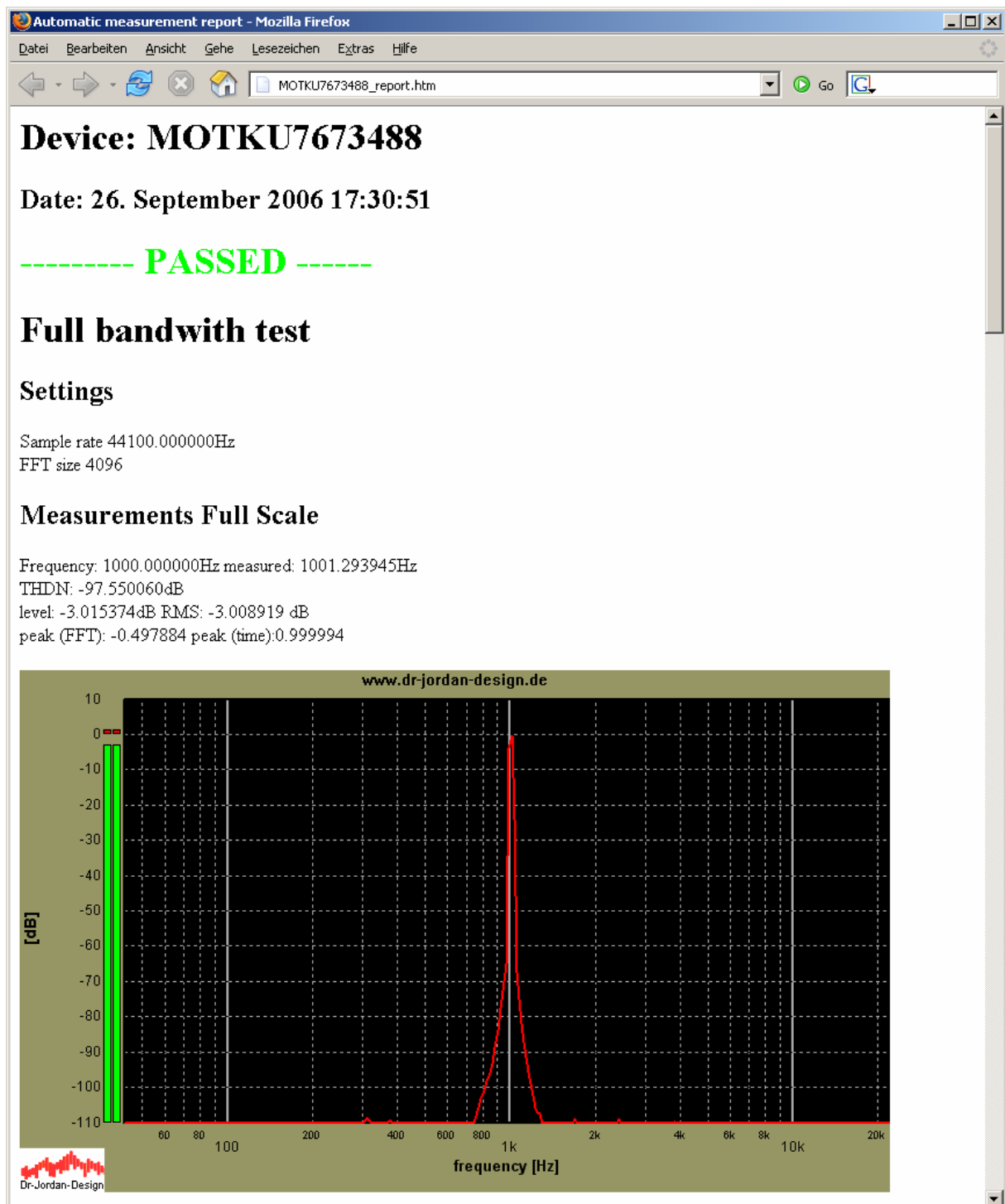

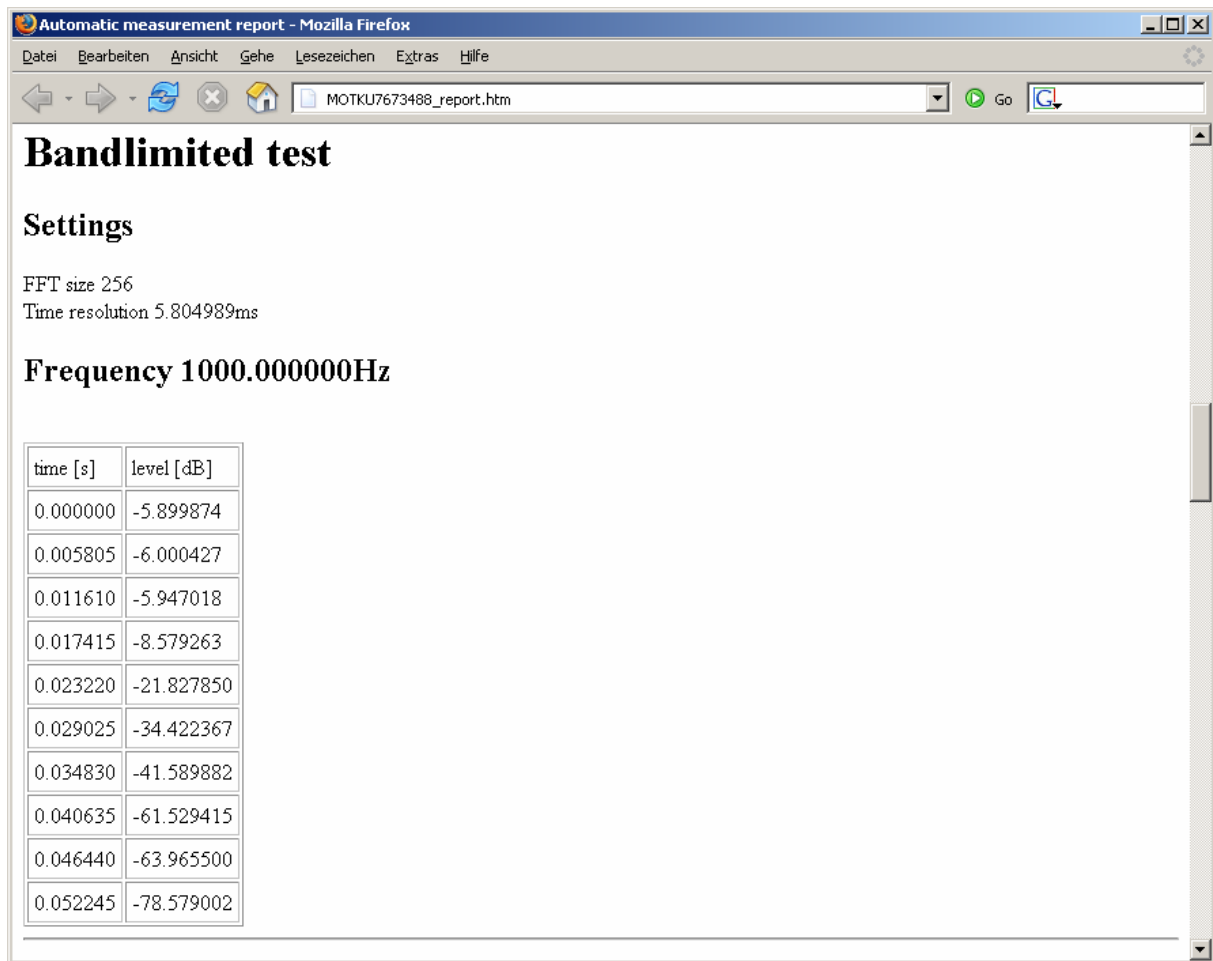You can select the following parameters:
- THD
- THD+N
- Inband Level
- Level
- Peak Level
- Peak Position/ Frequency
- Channel Separation

Report generation

WinAudioMLS can generate full automatic test reports. All measurements results are logged to a .html file for easily viewing with a web browser. These reports include tables, pictures serial numbers etc. Below you will see an example of such report.

We integrate such reports into WinAudioMLS exactly to your requirements.

Automatic measurement report - Mozilla Firefox

Datei   Bearbeiten   Ansicht   Gehe   Lesezeichen   Extras   Hilfe

MOTKU7673488_report.htm   Go

Bandlimited test

Settings

FFT size 256
Time resolution 5.804989ms

Frequency 1000.000000Hz

time [s]	level [dB]
0.000000	-5.899874
0.005805	-6.000427
0.011610	-5.947018
0.017415	-8.579263
0.023220	-21.827850
0.029025	-34.422367
0.034830	-41.589882
0.040635	-61.529415
0.046440	-63.965500
0.052245	-78.579002

Custom limits

WinAudioMLS can read limits from simple text files. Within these files you define limits for test parameters. Based on this WinAudioMLS generates pass/fail information.
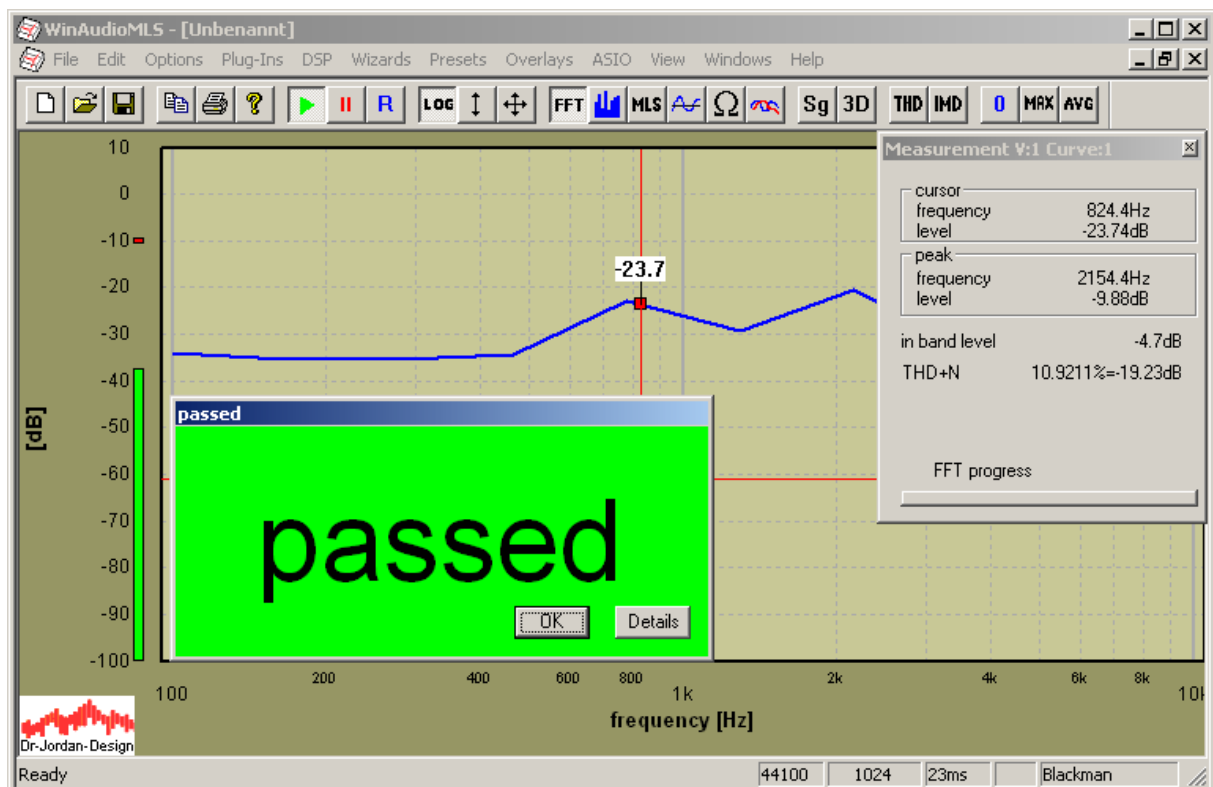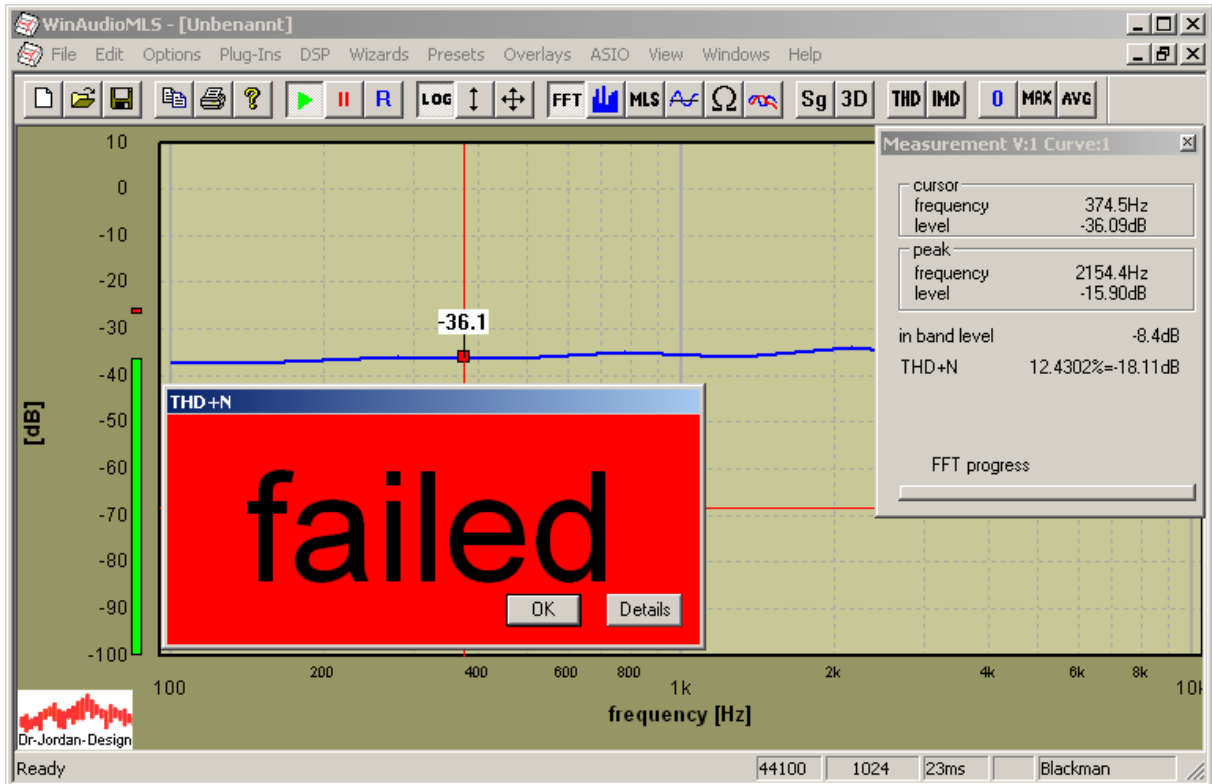The following parameters can be configured:

- THD+N
- THD
- Frequency response with upper and lower limit
- Sensitivity
- Balance
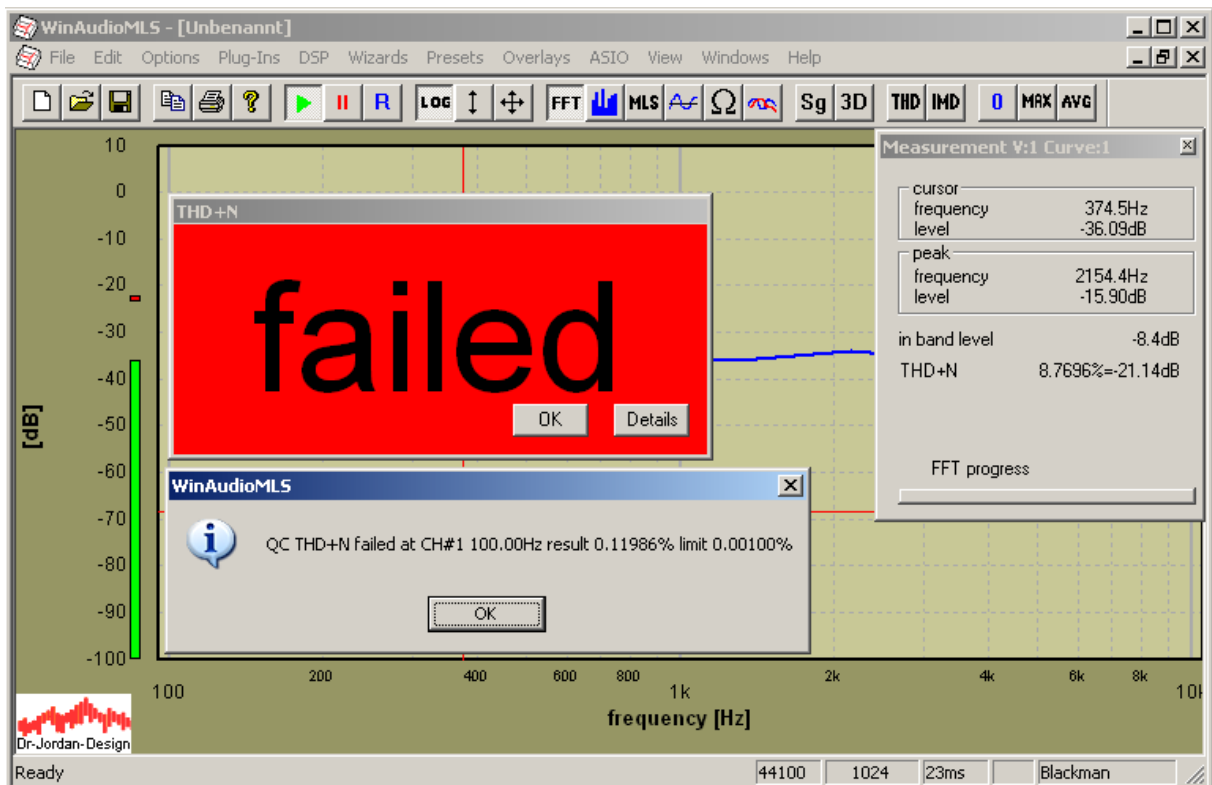- Polarity

Other parameters are supported on request.

Large pass/fail information

WinAudioMLS can display the test results in large colorful information boxes. This feature keeps the training effort low.

You can get detailed information, why a test failed.

Dynamic overlays

WinAudioMLS can plot reference data as overlays, which are drawn together with the measurement data. Overlays can be generated from measurement data or imported from simple text files. The normal overlays are drawn at fixed positions.
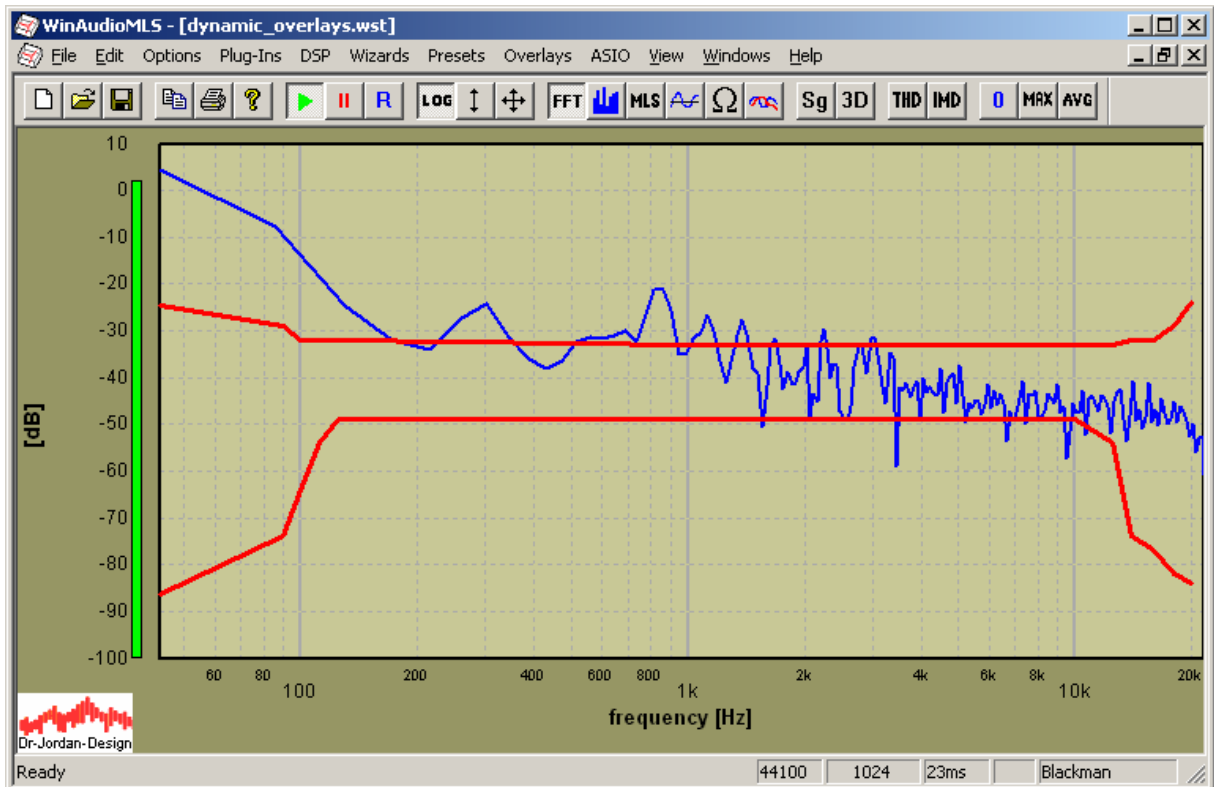The following plot shows the upper and lower limit for the frequency response and the live input.

Instead the dynamic overlays track the input at a free definable frequency.
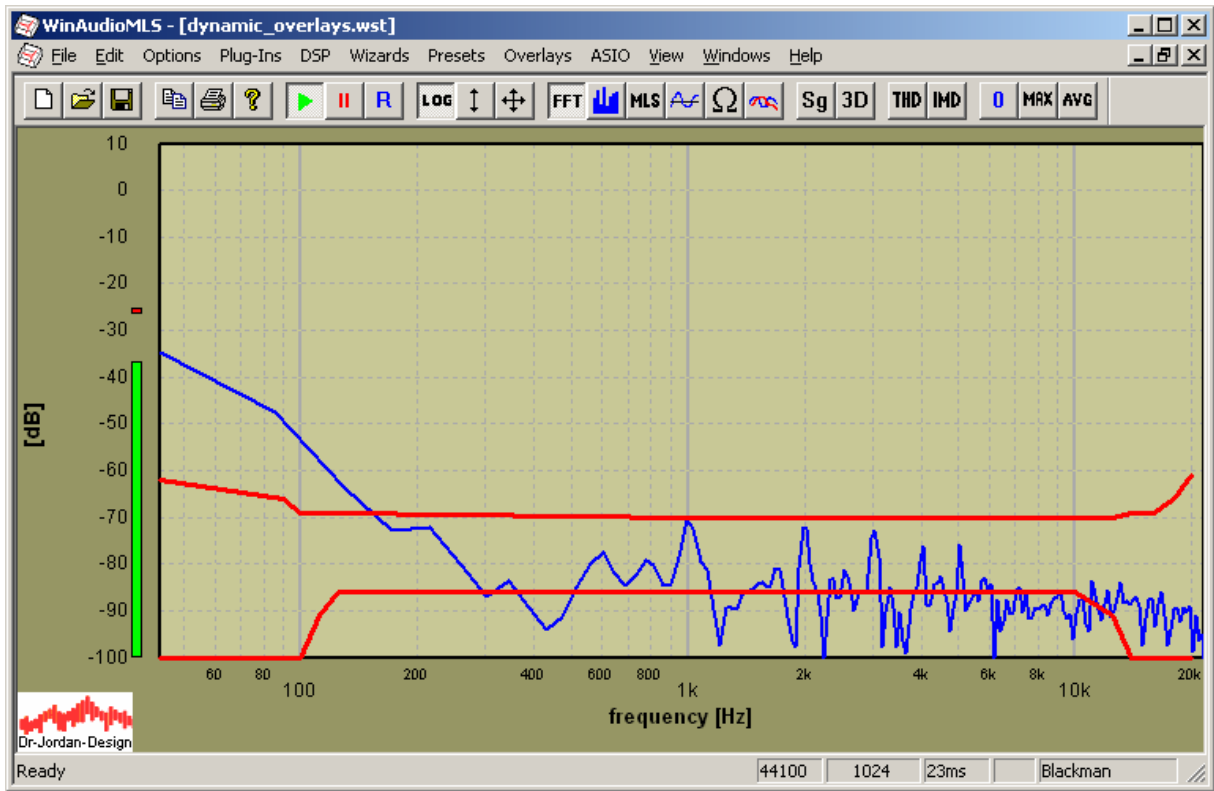
The dynamic overlays follow the input level.
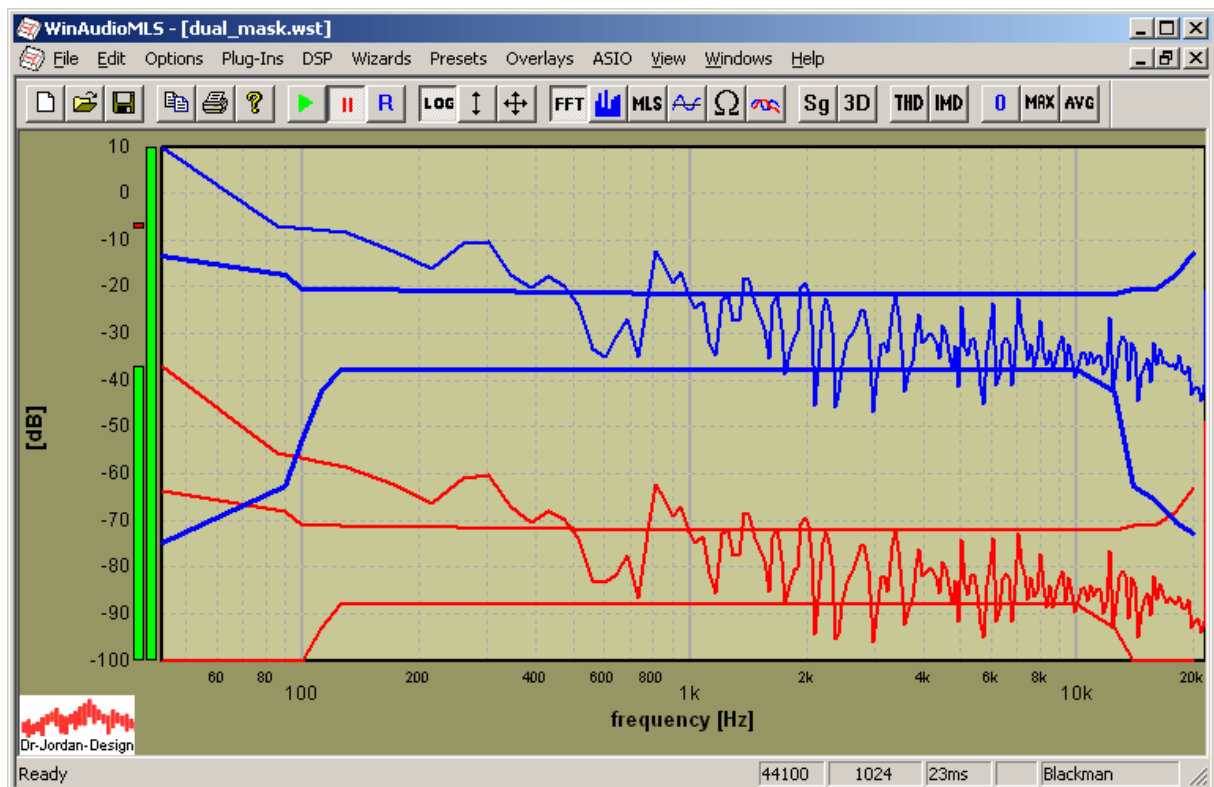
Dr · Jordan · Design

This feature is ideal for matching frequency response criteria with varying input levels.

You can configure individually for each overlay:

- channel
- reference frequency
- offset

The calculation is done for each channel individually. You can display the same mask for both channels or use a separate set.

Automating WinAudioMLS with script engine

WinAudioMLS contains an optional script processor, which allows controlling the program from the command line. This feature is ideal for automated batch processing used e.g. for production testing. WinAudioMLS is controlled with the program WAremote.exe. This program sets different measurement modes and options, stores measurement results etc.
with e.g. "WAremote sine 1000" you can set the signal generator to a 1kHz sine output. You can easily integrate this interface to other applications e.g. visual basic.

Full custom design

Although WinAudioMLS is very flexible and supports a wide range of functionality, there are cases where you require special features or a different graphical user interface. From our experience it is the fastest and most cost effective solutions, if we apply these custom features into WinAudioMLS directly. You simply specify the report generation, measurement procedure or user interface and we integrate this exactly to your needs.