

## Psychoacoustic Test Bench BZ 5301

The new Sound Quality option

**Psychoacoustic Test Bench is an advanced option for the new Sound Quality software. It completes the sound quality solution.**

**Psychoacoustic Test Bench controls the specific objective tests (metrics) carried out by Sound Quality and also manages the Paired Comparison and Semantic Differential subjective jury tests.**

**For specified sound files in .wav format, the software will calculate a sound model (a formula for a combination metric) using statistical analysis by correlating subjective and objective sound tests.**

### Subjective Tests

A user-defined jury test answer form and playlist are produced for each subjective test session, and the results are saved in an Excel worksheet. Multiple jury voting can be collected via the Internet. A fully detailed

report score sheet is provided for each jury session. The software saves the Excel worksheets, play lists and HTMLs and you can carry out as many subjective tests as required. New worksheets are automatically assigned for each test.

### Objective Tests

The objective test tool calculates the user-selected metrics for specified wave files. The loudness analysis parameters can be set from 7698. The test results are saved in an Excel worksheet and the saved data includes wave file and metrics names, loudness settings, and the objective metric values. If the sound is binaural, both the left and right channels can be calculated and displayed, both individually and as a mean.

### Statistical Analysis

The statistical analysis function calculates the correlation between the objective and subjective tests. An advanced Excel function calculates the optimal straight line estimate for a given set of input and output values.

The statistical analysis calculation provides an automatic search facility using regression analysis to find and calculate the test model – the final combination metric – based on the pre-selected number of metrics. It compares the predicted values from the model with the actual results from the subjective listening tests. The metric and all data are saved for future use.

### Features

- Advanced tool which is fully integrated with PULSE Sound Quality
- Allows multiple calculation of sound quality metrics by controlling Type 7698
- Supports Semantic Differential and Paired Comparison subjective test methods
- Creates user-defined playlists and answer forms
- Supports multiple jury sessions
- Automatically collects jury preferences via the Internet and calculates the overall preference
- Performs Linear Regression analysis and calculates the best possible sound model or combination metric by correlating the objective and subjective test data
- Uses the Microsoft Excel environment to display test results

### Benefits

- Optimises time by increased speed and therefore saves money
- Minimises the need to assemble juries of representative listeners
- Optimises the sound quality aspect of the product development process

