

# PRODUCT DATA

## DTS Contribution Analyzer Type 8601-P

DTS Contribution Analyzer Type 8601-P is a PULSE™ NVH Vehicle Simulator module that allows you to import source strengths and transfer functions directly into the Simulator. DTS Contribution Analyzer does the convolution for all data and load conditions at import. At run-time, it allows real-time displays of source strengths and transfer functions, which can be different according to operating conditions. Filters can also be applied to the source strengths or FRFs and visualised.

DTS Contribution Analyzer enables contribution sound objects to be created, viewed, compared and modified on and off-line. It also allows contributions to be summed and saved.

### Uses and Features

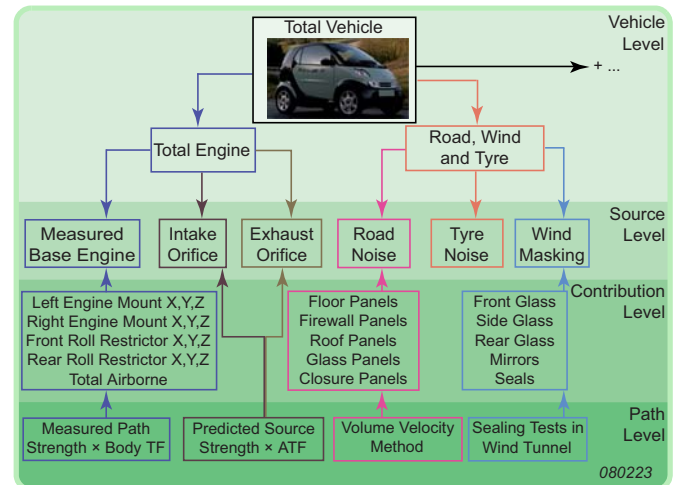
- Produce contribution data with the Contribution Creation Wizard
- View the created sound objects
- Display and compare the contributions
- Modify source strength and FRF
- Sum contributions together

### Capabilities

With DTS Contribution Analyzer, you can calculate contributions from the products of source strengths and frequency response functions. This approach is valid for any equivalent single input/multiple output system (for example, intake orifice, exhaust orifice, force-vector structure-borne paths, or operational TPA).

Source strengths (and resulting contributions) can be in time history format (free-driving is not possible in this case), or can be pre-processed into free-driving data formats (orders, arrays, etc.) using DTS Source Level Data Preparation Type 8601-L.

The contributions, calculated from the product of the source strength and the transfer functions, can be displayed as 2D graphs or 3D colour maps. Modifications to contributions, source strengths and transfer functions can be performed off-line or in real-time using DTS Engineering Type 8601-B. The filters thus created can be exported for the purpose of target setting.

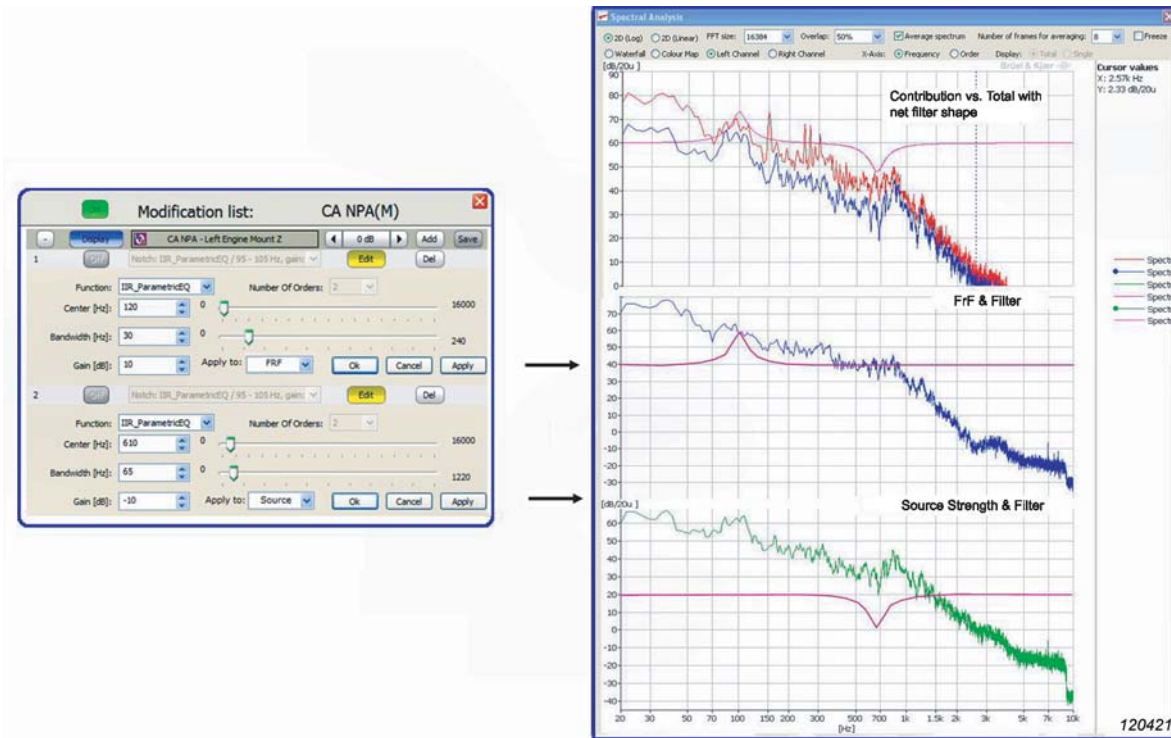


DTS Contribution Analyzer is designed to prepare data efficiently for the multiple load/gear conditions represented in NVH Vehicle Simulator Type 3644. It does this by enabling the calculation of path contributions from source strengths and transfer function data directly in the Simulator's Assign Data task.

The Contribution Creation Wizard (see Fig. 1) enables you to create your contribution level sound objects easily. You can use the wizard to create events, arrays and orders. And as an added convenience, the wizard can use a different FRF for each load (or speed) all in the same run.

At run-time, contributions can be modified by adding a filter to the source strength or the FRF (see Fig. 1).

**Fig. 1** Real-time visualisation of contributions in DTS showing how modifications can be made: An attenuation is added to the source strength at ~610 Hz, an amplification filter is added to the FRF at ~120 Hz and the contribution is shown with the effect of both filter shapes



## Specifications

DTS Contribution Analyzer Type 8601-P is an optional module for the [PULSE NVH Vehicle Simulator Type 3644 system](#). Type 8601-P expands the system's capabilities to use a contribution level model by calculating path

contributions from source strength and transfer function data directly in the Assign Data task of the NVH Vehicle Simulator, with visualisation and replay of the resulting contributions as well as visualisation of the source data.

During engineering, contributions from the various sources to the driver's position can be determined using [source path contribution tools](#).

## Ordering Information

**Type 8601-P-X\*** DTS Contribution Analyzer

### REQUIRED SOFTWARE

Type 8601-A-X\* DTS Core and Visuals

### SYSTEMS

Type 3644-A Desktop NVH Simulator, Jury and Engineering  
 Type 3644-B Desktop NVH Simulator, Jury only  
 Type 3644-C Desktop NVH Simulator, Engineering only

### OTHER NVH SIMULATOR AND SOURCE PATH CONTRIBUTION SOFTWARE

Type 8601-E-X\* DTS Presenter, including Mixer and Jury (no modifications)  
 Type 8601-L-X\* DTS Source Level Data Preparation  
 Type 8601-N-X\* DTS On-Road Simulator  
 Type 8601-M-X\* DTS Road Creator  
 Type 8601-R-X\* DTS Fixed Vibration  
 Type 8601-X\* SPC Time Insight  
 Type 7798-A-X\* SPC Viewer  
 Type 7798-B-X\* PULSE SPC Mount Stiffness and Matrix Methods  
 Type 7798-C-X\* PULSE SPC Matrix Method with PCD  
 Type 7798-D-X\* PULSE SPC Multiple Coherence Method

Type 7798-E-X\* PULSE Time Domain SPC

### OPTIONAL HARDWARE

Type 4100 Sound Quality Head and Torso Simulator  
 Type 4101 Binaural Microphone  
 HT-0018 STAX SRS-3050 II Electrostatic Headphone System  
 HT-0019 STAX SR-303 Classic Electrostatic Headphones  
 UA-1692 ECCI Steering Wheel and Pedals Set

### SUPPORT PRODUCTS

M1-8601-P-X Software Maintenance and Support Agreement for DTS Contribution Analyzer

\* X indicates the license model, either N: node-locked or F: floating

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