

PULSE 7.0 – Application Updates

Steady State Response Analysis – Type 7772

- Updated with User-defined Scans and the possibility for directivity measurements. The Arbitrary Waveform generator now supports equalisation of signals

PULSE Noise Source Identification – Type 7752

- A complete re-write of this popular application now fully integrated in PULSE

Operational Modal Analysis – Type 7760

- Now including quad view, side-by-side animation, coloured surfaces, MAC table and investigation of the Final Prediction Error in the frequency or time domain



PULSE Material Testing – 7758

- With support of transmission loss measurements

Value Pack for Sound Power – BZ 5305

- Freely structures the measurement sequence

Modal Test Consultant™ – Type 7753

- Now including a special Force Calibration task for automated ratio calibration as well as a new Hardware Setup Table



APPLICATION UPDATES

PULSE Improved Usability – NEW

- Hardware Tabular View
- Display Manager
- Analyzer Parameter Changes without Reactivation
- FFT Analyzer Start Trigger
- Simple Setting of FFT-Averaging Time
- Absolute Levels on Signal Triggers
- Easy Tracking of Calibration Data
- Embedded Visual Basic® for Applications
- Hardware Key Free or Floating Software Licenses
- Support of Windows® XP



PULSE Applications – NEW

- 200 kHz Generator, 2/1-channel Input/Output Module
- PULSE Auxiliary Parameter Logging
- PULSE Time File Management
- PULSE Data Manager
- Operating Deflection Shape Test Consultant
- PULSE Beamforming Software

IMPROVED USABILITY

Data Acquisition

Scalable channel count dependent on license
Mixed conditioning: Direct/ DeltaTron® (ICP**)/Pre-amplifier (incl. polarization)
TEDS – Smart transducers
Max. frequency range 200 kHz
Simultaneous analysis of multiple frequency spans

FFT

50 – 6400 spectrum lines
Measures time, autospectrum and cross-spectrum
Baseband and zoom analysis
Centre frequency resolution of 1 mHz
Real-time extraction of frequency bands

Real-time Digital Filters

1/1-, 1/3-, 1/12-, 1/24-octave analysis
Linear and exponential averaging
Overall A and linear levels. Max./min. hold.
Processing includes:
– auto- and cross-spectra
– intensity and complex intensity
– mean pressure and particle velocity spectra
Articulation index, Stationary loudness, Reverberation time

Real-time Overall Level

Broadband analysis, impulse detectors, linear, exponential and peak averaging, Lin., A, B, C and D weighting

Measurement Control

Trigger types: signal; external; manual; time; generator; internal level (CPB and Overall Level); tachometer, speed and speed interval (Type 7702). Pre- and delayed triggering. Acoustic pre-weighting: A, B, C, and D

Measurement

4 multi-buffers for storing measurements. The Z-axis can be annotated by index number, by time or by another parameter, e.g., RPM

Displays

Graph types include waterfall, contour, line, curve, overlay, Nyquist and multi-value. Harmonic and individual slices can be extracted from contour plots. Linear and logarithmic axes

Post-processing

(Analyzer dependent) Time, Complex time, Auto- and cross-spectrum, Phase-assigned autospectrum, FRF (H1, H2, H3), 1/FRF (1/H1, 1/H2, 1/H3), IRF (h1, h2, h3), Coherence, Signal-to-noise ratio, Coherent/non-coherent power, Auto- and cross-correlation, Intensity/complex intensity, P-I index, Cepstrum, Articulation index, Stationary loudness, Reverberation time (all measured and calculated according to relevant international standards)

External functions

Synthesis of 1/n-octave spectra from frequency domain data
Extraction of complex components such as:
• Component:
This selects a component of a complex function. The choices available are: Magnitude, Wrapped Phase, Unwrapped Phase, Real Part, Imaginary Part, RPM Interpolation, Orbit plots
• Sound Quality Parameters:
Articulation Index, Loudness Free Field, Loudness Diffuse Field

Generator Waveforms

Sine – fixed or swept (burst or continuous)
Dual sine – fixed, swept or combination
Random (burst or continuous)
Pseudo-random, Periodic random
Arbitrary waveforms (2 MSamples)

Power Supplies

110 to 230 V AC
10 to 32 V DC
Battery operation (3560 C only)
RPM

*ICP is a registered trademark of PCB Piezotronics, Inc.

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Brüel & Kjær 

Technology with Personality



PULSE 7.0 Family

Brüel & Kjær 

Technology with Personality

There is no technology without human knowledge, and PULSE™, our best-selling Multi-analyzer System, is no exception. First appearing in 1996, this modular and scalable platform is built on 60 years of Brüel & Kjær innovation and expertise. The PULSE family consists of an ever-increasing number of sound and vibration applications, and forms a solid foundation from which you can create a system to suit your own needs.

PULSE Continues to Grow

The PULSE analyzer family from Brüel & Kjær covers a wide range of solutions ranging from PULSE Lite with its basic FFT/CPB analysis to the PULSE Multi-analyzer covering advanced acoustics and vibration applications.



Existing PULSE IDA® customers can look forward to a number of usability enhancements deriving from our latest PULSE release. New, exciting features and improved functionality come free of charge to all customers with a valid PULSE Maintenance and Support Agreement.



PULSE 7.0

New Highlights Include

Hardware Tabular View – Simplified tabular form for easy setup of especially many channels. View and manipulate all relevant parameters for single or multiple channels simultaneously.

Display Manager – Easy operation, better overview and faster setup. Organise, view and manipulate content of the Function and Display Organisers in the tabular view display.

Analyzer Parameter Changes without Reactivation – Many changes in PULSE can now be performed without reactivation, resulting in smoother, faster and more productive PULSE.

FFT Analyzer Start Trigger – Now possible to start the FFT Analyzer by any trigger event simplifying many different analysis types.



Simple Setting of FFT-Averaging Time – New mode for controlling averaging, that can be set in time or in spectra. PULSE optimises the number of averages to be used based on knowledge of frequency span, number of lines and overlap.

Absolute Levels on Signal Triggers – Now in absolute levels or percentage of a user-defined reference level. Level and hysteresis keep their absolute levels when input channel settings are changed.

Easy Tracking of Calibration Data – Ensures accurate and reliable measurements. Automatically tracks, applies and shares calibration data with any PULSE system in the test organisation.

Embedded Visual Basic® for Applications – Now simpler and faster to customise PULSE to fit your individual measurement and analysis needs.

Hardware Key Free or Floating Software Licenses – Tired of your old hardware key? PULSE now gives you the option of locking your license to a PC or a network server.

HIGHLIGHTS

PULSE 7.0 – New Hardware

200 kHz Generator, 2/1-channel Input/Output Module – Type 3110

A new input module designed to provide state-of-the-art performance with:

- High frequency range – 204.8 kHz
- 24-bit AD conversion to 25.6 kHz, 16-bit AD conversion to 204.8 kHz
- More than 140 dB spurious-free dynamic range



PULSE Auxiliary Parameter Logging – Type 7769

An integrated solution for combining dynamic data from noise and vibration channels with slowly changing data such as temperature, position, flow rate and CAN Bus data. This option is available for all existing IDA® PULSE customers without additional hardware.

More than 3500 customers are already using PULSE!

We must be doing something right!

NEW HARDWARE

PULSE 7.0 – New Applications

PULSE Time File Management – Type 7789

- A flexible editing tool for PULSE data recordings. You can view, listen, cut, copy, export and import time data as preparation for further analysis in PULSE

PULSE Data Manager – Type 7767

- A tool for managing numerous and different types of measurement data. You can easily document, label, save, retrieve, compare and report your PULSE data



Operating Deflection Shapes Test Consultant – Type 7765

- A new member of the modular Structural Test Consultant family for geometry-driven operational deflection shape measurements based on either frequency or order spectra

PULSE Beamforming Software – Type 7768

- Quick noise mapping – even of large and difficult-to-access objects. A full image of the acoustic radiation is processed from just one single-shot measurement



NEW APPLICATIONS