

Measurement 1. Record time 4s.

The screenshot shows the BK Connect 2018 software interface for a hammer test. The main window is titled 'Project 1 - Data Processing' and is in the 'SET UP' mode. The 'Measurement Control' panel shows 'Measurement # 1' and 'Result Name Hammer Pretest'. The 'Measurement Properties' panel shows 'Test Name Test 1', 'Setup name Setup 1', 'Averaging Exponential', 'Number of Averages 1', 'Analysis Mode Zoom', 'Zoom Centre Frequency 1600 Hz', 'Zoom Span 3200 Hz', and 'Record Length 4 s'. The 'Measurement Matrix' panel shows a table with columns for 'Data Name', 'DOF', 'References', 'Autospectrum', 'Coherence', 'Complex Time', and 'H1'. The 'Measurement Displays' panel shows 'One trace per display' and 'FFT (Autospectrum)'. The 'Signal 5, Autospectrum' window shows a frequency spectrum with a peak at 213.25 Hz and a magnitude of 33.0214 m/s. The 'Signal 5, Coherence' window shows a coherence plot. The 'Signal 5, FRF' window shows a frequency response function plot. The 'Signal 5, Complex Time' window shows a complex time plot. The 'Average Counter' window shows 'Exp: 1/1' in yellow text. The 'Signal Trigger' window shows 'Ready' in green text. The 'Impact Validation' window shows a 'Soft Hit' at $f < 1464.6$ Hz. The 'Show Log' button is visible at the bottom left. The 'Brüel & Kjær' logo is visible at the bottom right.

Data Name	DOF	References	Autospectrum	Coherence	Complex Time	H1
Signal 1	2	1	1	1	1	1
Signal 5	4	1	1	1	1	1

Measurement 6. Record time 8s. Vibrometer was reset right before this measurement.

The screenshot displays the Brüel & Kjær software interface for data processing. The main window shows the 'Measurement Displays' section with the following plots:

- Signal 5, Autospectrum:** A plot of acceleration magnitude (m/s) versus frequency (Hz) from 0 to 3.2k Hz. A prominent peak is visible at approximately 1600 Hz.
- Signal 5, Coherence:** A plot showing coherence values across the frequency range, with values generally near 1.
- Signal 5, Complex Time:** A time-domain plot showing the complex signal over 16 seconds.
- Signal 5, FRF:** A plot of Magnitude (Mag) in m/s/N versus frequency (Hz) from 0 to 3.2k Hz.

The 'Measurement Matrix' table is visible on the left side of the interface:

Data Name	DOF	References			FFT System		
		Autospectrum	Coherence	Complex Time	Signal 1	Signal 2	Signal 3
Signal 1	2	1	1	1	1	1	
Signal 5	4	1	1	1	1	1	

At the bottom of the interface, there are three additional windows:

- Average Counter:** Displays 'Exp: 1/1' in large yellow text.
- Signal Trigger:** A black window with no visible data.
- Impact Validation:** Shows a 'Soft Hit' with a frequency $f < 1007.1$ Hz. It includes a plot of magnitude versus time and another plot of magnitude versus frequency.

The status bar at the bottom indicates 'Measurement is completed' and includes the Brüel & Kjær logo.

Weighting

BK Connect 2018 | Project 1 - Data Processing

IMPORT MODEL **SET UP** MEASURE PROCESS ANALYSE VIEW REPORT

Hammer Setup Single Impact Trigger **Weighting** Pretest Result Mode Measuring ...

Measurement Control **Ready**

Hammer Weighting

Weighting Type: Transient | Length: 1.20 s | Shift: 0 s | Trailing: 0 s | Leading: 0 s

Response Weighting Signal 5

Weighting Type: Exponential | Suppression: 24.24 % | Shift: 0 s | τ : 14.41 s | Leading: 0 s | σ : 0.069 rad/s | 0.011 Hz

Hammer Weighting Properties

Analysis Mode: Zoom | Zoom Centre Frequency: 1.6k Hz | Zoom Span: 3200 Hz | Record Length: 4 s | FFT Lines: 12800 | Frequency Resolution: 0.25 Hz

Description (localize)

Start recording and hit with the hammer at the driving point.

The hammer Trigger properties are active. Only proper hits will be displayed.

Hammer Setup

Every new hammer hit will replace the previous hit. You can change the weighting properties by editing the values or moving the grippers.

The Weighting properties will automatically be transferred to your Hammer Measurement setup.

The figure displays four plots showing magnitude (Mag) versus time (Time) for different weighting functions. The top-left plot shows a transient weighting function with a sharp peak at approximately 2.5 seconds. The top-right plot shows an exponential weighting function with a decaying envelope. The bottom-left plot shows a weighting function with a sharp peak at approximately 2.5 seconds. The bottom-right plot shows a weighting function with a decaying envelope. The y-axis for the top-left plot is labeled 'Mag N' and ranges from 0 to 500. The y-axis for the top-right plot is labeled 'Mag m/s' and ranges from 0 to 100. The y-axis for the bottom-left plot is labeled 'N' and ranges from 0 to 500. The y-axis for the bottom-right plot is labeled 'm/s' and ranges from 0 to 100. The x-axis for all plots is labeled 'Time' and ranges from 0 to 8 seconds.

Show Log

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