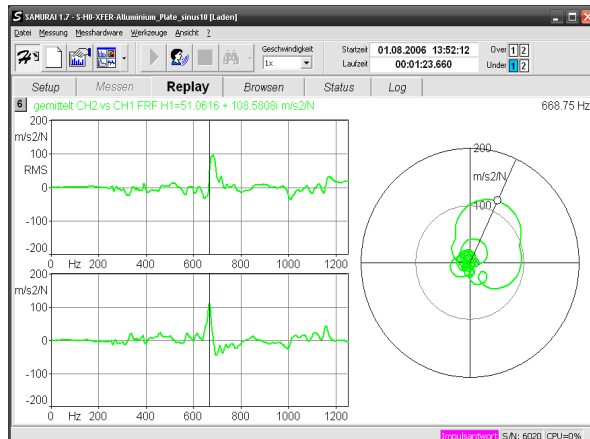


## SAMURAI option: TRANSFER FRF



### Field of Application:

In acoustic and other oscillatory processes, relations between signals of different origins are often of interest (e.g. coherence of two signals, relationship between excitation and response of a structure). A central rôle is played by the determination of the frequency-dependent transfer function (or Frequency Response Function, FRF) as well as related values which are all calculated from the FFTs of the signals.

This option is applied e.g. when measures are to be taken for vibration damping or noise reduction by a targeted influencing of the vibration transfer.

### Description:

This option includes two analysis alternatives: the investigation of two quasi-stationary signals or the analysis of structures via impulse excitation (using accelerometers and an impulse hammer). For impulse excitation, the software supports the organization of the measurement points on a linear or planar grid. The visualization of the oscillation modes is not included in this option; however, the measurement data can be imported into the ME'scope software.

### Technical Data

Features	
	<ul style="list-style-type: none"> <li>• Bandwidth, number of lines, windowing and averaging mode selectable</li> <li>• Configurable exponential window for force excitation</li> <li>• Simultaneous calculation of the transfer values between arbitrarily selectable pairs of channels (e.g. Ch2 versus Ch1, Ch3 versus Ch1, Ch3 versus Ch2)</li> <li>• Values calculated: autospectrum reference/response, coherence and Coherent Output Power, transfer functions (H1, H2, 1/H1 and 1/H2), cross-correlation and cross-spectrum, impulse response, autocorrelation reference/response, Cepstrum reference/response</li> <li>• Display of complex values as either Amplitude / Phase / Nyquist or Real / Imaginary / Nyquist</li> <li>• Operator guidance via an intuitive graphical user interface for the whole measurement process</li> <li>• Instructions and overload notification via speech output</li> <li>• Export to ME'scope (Vibrant) via UFF, Excel, NWWin</li> </ul>

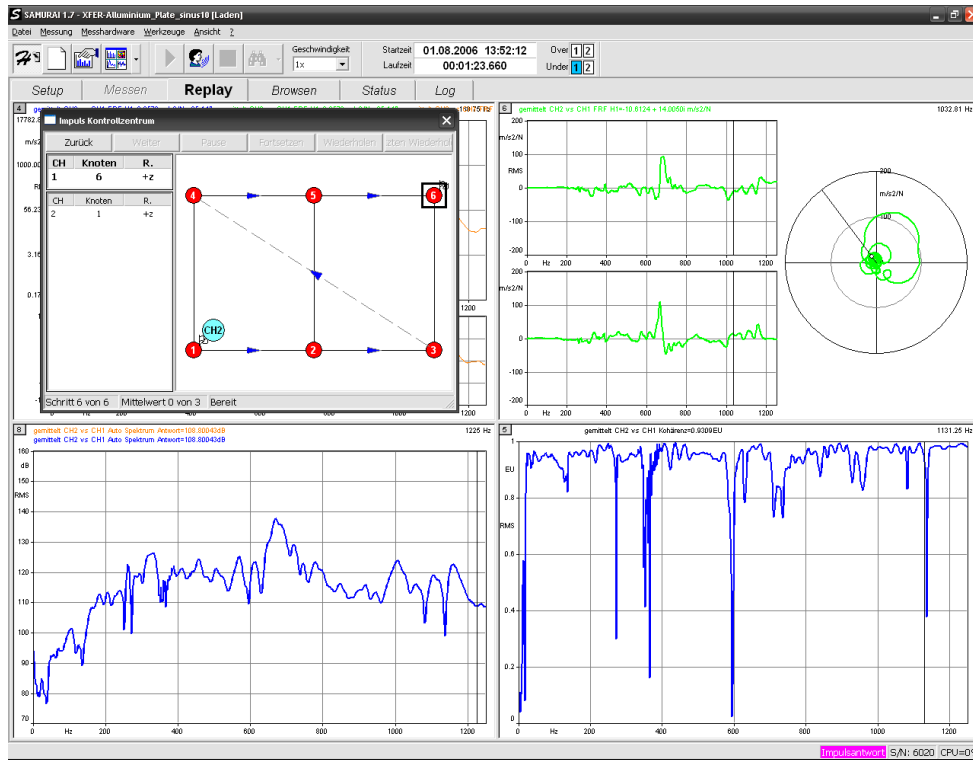


Figure 1: Structure analysis

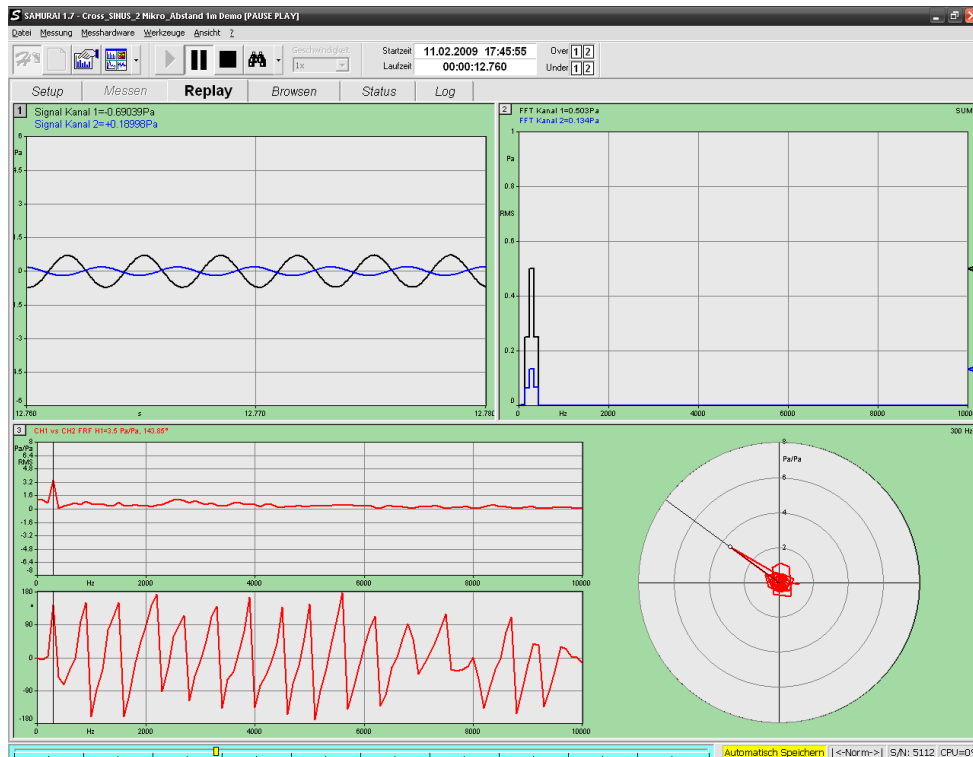


Figure 2: Transfer function of stationary signals