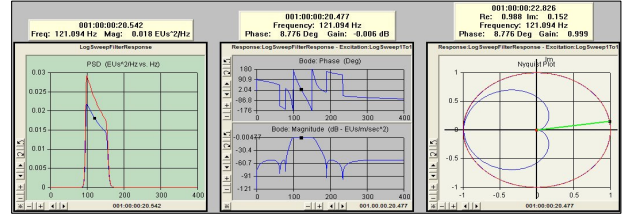


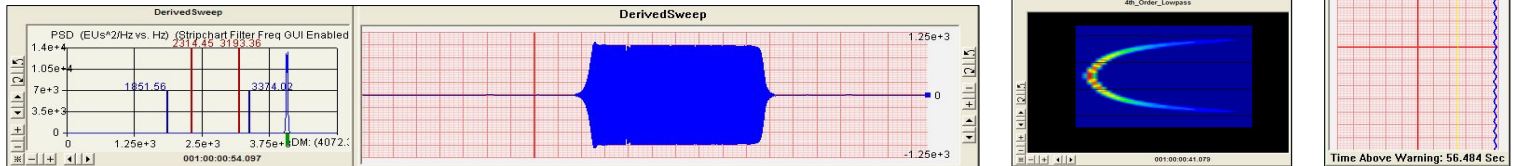
COMMON FEATURES AND CAPABILITIES OF IADS FREQUENCY DISPLAYS

- Frequency Displays Created with One Click on Stripchart Right Click Menu
- Global Cursor (shown) displays Data Value at One Frequency Simultaneously over Different Plot Types
- Welch Method Spectral Averaging (2-5 Block or Indefinite), 0-95% Overlap
- Selectable Envelopes (Frequency/Frequency Response Plots)
- Reduce an Entire Sweep or Maneuver to One Spectrum for Analysis
- Use Dynamic Autoscaling to Keep Data Peaks Clearly Visible
- Peak Hold (Frequency/Octave/Frequency Response Plots)
- Save Analysis Results to a Permanent Log for Report Generation
- Export Frequency Domain Data to CSV File, Excel® and MATLAB®
- Linear/Logarithmic/dB Axis Scaling (Phase Axis in Degrees/Radians)
- Frequency Spectra are Obtained with a Fast Fourier or Chirp-Zoom Transform
- Rectangular, Hanning, Hamming, Blackman, Flat Top and Kaiser-Bessel Windows - Block Sizes 64, 128, 256, ..., 65536



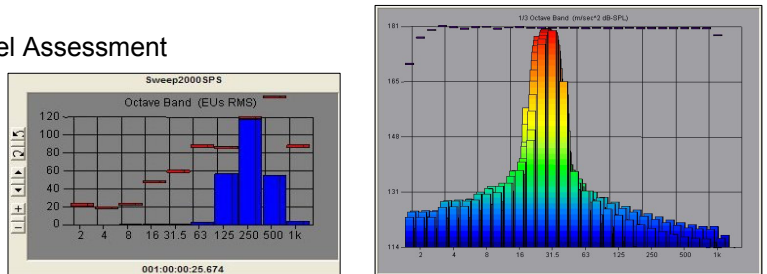
Frequency Plots

- Power Spectral Density and Autospectrum Display Options
- Use Multiple Parameter Waterfall to Compare Spectra in Real Time
- Find Power in a Specified Frequency Band with Selective Area RMS (SARMS)
- SARMS can also be used to Find Power Levels in Leaky or Scalloped Spectra
- Select 2D Waveform and Spectral Line Display Options for General Analysis
- Time-Based and Amplitude-Based Color Gradients Aid Visual Level Assessment
- Real Time Dominant Peak Sensing allows Hands-Off Monitoring of Modal Peaks
- Perform Real Time or Fixed Block Harmonic/Spectral and Modal Analysis
- Use 3D Single Parameter Waterfall for Time-Frequency and Order Analysis
- Adjust Stripchart Filter easily in Real Time (Filter Frequency GUI)



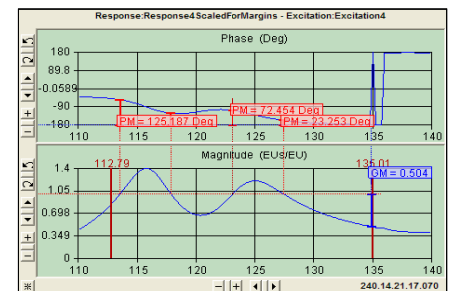
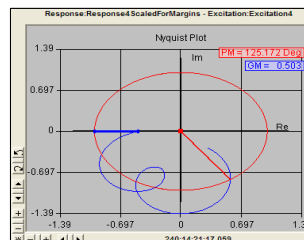
Octave Band Plots

- Amplitude-Based Color Gradients Aid Real Time Visual Level Assessment
- 2D, 3D or Waterfall Display Options
- Simple FFT-Based Algorithm for Computational Efficiency
- Octave Band and 1/3 Octave Band Displays Available
- RMS or dB-SPL Scalings with User-Defined Reference
- Peak Hold can Decay for Acoustic-Audio Applications
- ANSI-Standard Bands up to Nyquist Frequency (Inclusive)
- Custom Scalings and Weightings can be Developed



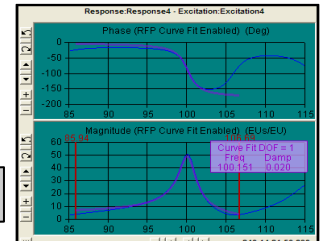
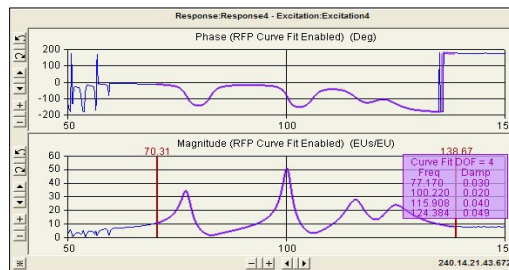
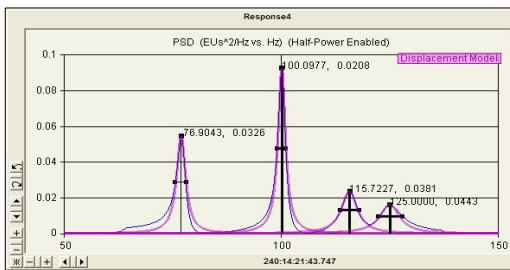
Frequency Response Plots (RFP) and Nyquist Plots

- Phase and Real/Imaginary/Magnitude, Coquad, Bode (dB or Simple Gain)
- Real Time RFP Curve Fit
- 3-Point and 7-Point Smoothing
- Phase Unwrapping Options
- Waveform and Spectral Lines
- Coherence Plot for Confidence
- Hint Shows Phase and Magnitude
- Real Time Phase and Gain Margins
- Unit Circle can be Displayed
- Real Time Stability Analysis
- Closed Loop Feedback Models

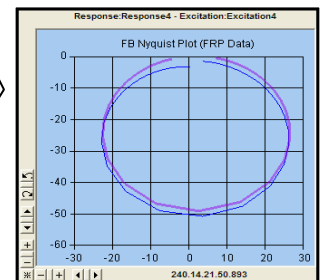


Apply Standard Frequency Domain Modal Analysis Techniques to Response Curves

- RFP Curve Fit Results Overlay and Data can be sent directly from a Frequency Response Plot to a Nyquist Plot
- Half-Power Damping (peak-picking) provides Rapid Assessment of Frequency and Damping
- Estimate Modal Parameters for even highly damped Modes using moveable Half-Power Bar
- Disp/Vel/Acc Model 1DOF Overlay provides Visual Feedback of Accuracy of Estimates
- Half-Power Method available on Frozen Frequency Plots and Frequency Response Plots
- RFP Curve Fit provides Modal Parameter Estimates for MDOF in Real Time (Can be Automated)
- Compare RFP Curve Fit and Half Power Damping Estimates for Increased Confidence
- Magnitude and Phase Overlays for Instant Accuracy Assessment and Spec Compliance
- Easy to Use - Activate, Set Frequency Band, Adjust DOF
- Extract Frequency and Damping from Closely Coupled Modes
- Save all Analysis Results to a Permanent Log



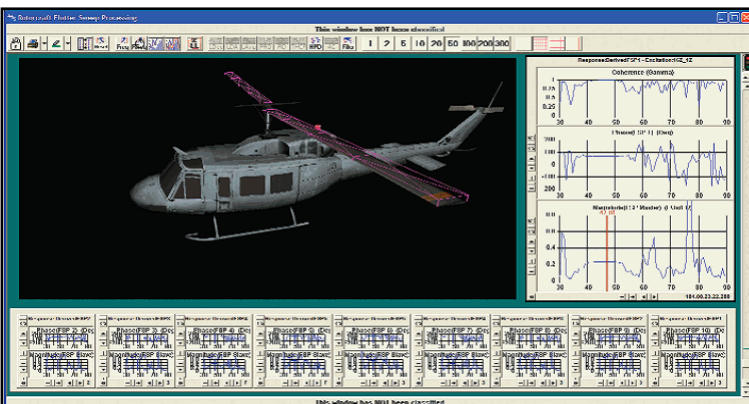
RFP Curve Fit on One Mode



Nyquist Plot Showing Same Fit

Analysis Table

Frequency Domain	Time Domain	Digital Signal Processing
Spectral/Harmonic Analysis Bode, Coquad & Nyquist FRPs Open/Closed Loop Feedback Analysis Phase & Gain Margin Stability Analysis Fast Fourier Transform Selective Area RMS Dominant Mode Finder Octave Analysis 3 and 7 Point Smoothing Rational Fraction Polynomial Curve Fit Half-Power Damping (Peak Picking) Chirp-Zoom Transform Filter Frequency GUI Windowing - Hanning, Hamming, Blackman, Kaiser-Bessel, Flat Top and Rectangular Block Sizes - 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16384, 32768 and 65536	Random Decrement Autocorrelation Logarithmic Decrement (1DOF) Logarithmic Amplitude Picking (1DOF) Logarithmic Decrement Averaging (1DOF) Real Time Random Decrement Pseudo Random Decrement Wavelet Denoise Randomdec & PseudoRandomDec AutoAnalysis Time History Curve Fit (MDOF)	Butterworth Filtering Elliptic Filtering Nulling (calibration) Derived Equation Engine Wild Point Editing Spike Detection and Correction Parameter Identification Custom IIR and FIR Filtering
		Specialty Order Analysis Waterfall Time Frequency Analysis Operating Deflection Shapes Automated Time Domain Analysis Automated Frequency Domain Analysis



Operating Deflection Shapes (ODS)

- Identity Mode Shapes Immediately after End of Test Point
- ODS Animates using Response Data at Selected Frequency
- Perform Modal Analysis on Master and Slave FRPs
- Select Frequency of Interest on Master FRP with Mouse
- Animation Amplitude and Frequency are User Adjustable