

# Model 5940-003 Sine Analyzer

Version 1.4

## Features

Proprietary reference-sine (COLA) analysis

Linear or logarithmic frequency spacing of frequency points

Analyzes using constant- or proportional-bandwidth filters, or peak-to-peak amplitude detection

Very steep band-pass tracking filter

Spectral averaging for any number of channels

Results plotted in user-configurable formats

## File Formats

SDRC "Universal" (Type 58), Comma-separated variable (CSV) Excel-compatible, CATS or DATX format, Statistics, JPEG graphical plot output

## Channel Selection Strategies

Random/Manual, Contiguous Set (batch), List File

Superimposition of limits on plots

Manual or automatic plot scaling

600 channels per hour Analysis/Hardcopy speed (typical)

## Ordering Information

Model 5940-003

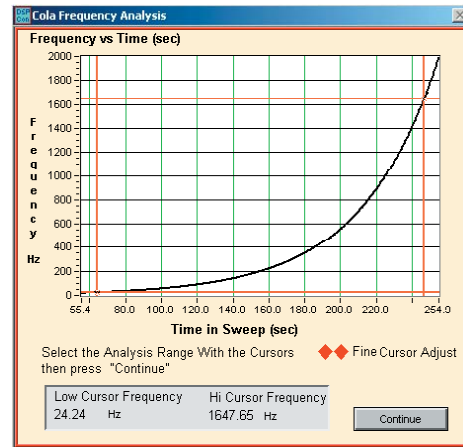


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## Sine Analysis Post-Processor

The DSPCon Sine Analysis tool analyzes one or more CATS or DATX time history files to determine measured structural response. The results of two or more channels can be analyzed to determine the transfer function phase and magnitude between them.

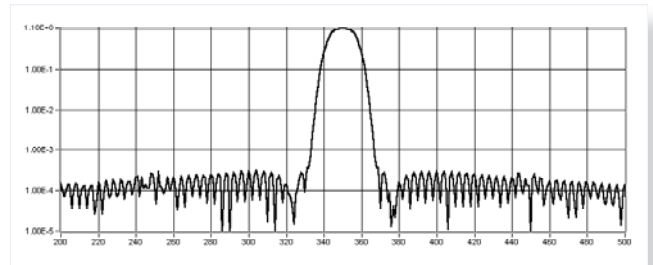


Sample COLA Analysis

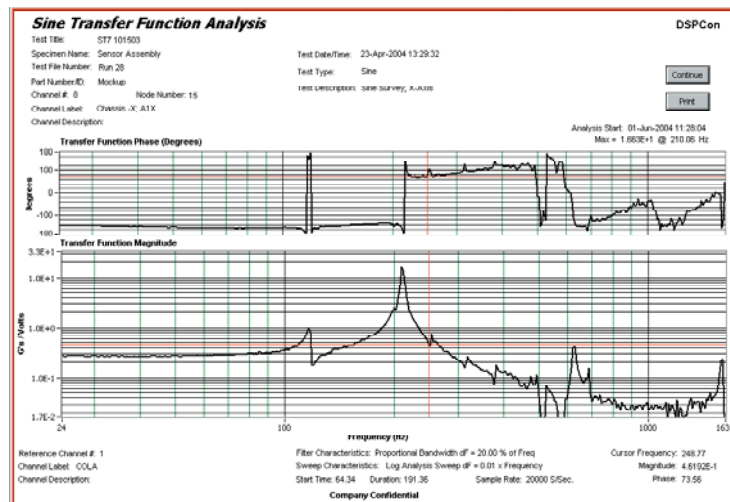
Sine sweep time series data stored in time history files is analyzed to calculate the Fourier coefficients of the spectrum as a function of frequency. The Analyzer uses a COLA (Constant Output Level Adapter) signal to determine the instantaneous frequency as a function of time and then calculates the spectrum for linearly- or logarithmically-spaced frequency values. The results are presented in graphical/hardcopy form and in several file formats.

For optional Transfer Function analysis, the Analyzer calculates the sine data for both a reference and an analysis channel (or set of channels averaged), then presents the quotient between them as a function of phase and magnitude.

Also, both analyses can be run to perform sine calculation on the analysis channel for plot and hardcopy production, and to compute the transfer function for the sine calculation of a reference channel to allow plot and hardcopy rendering



Bandwidth Filter Shape Example



Analysis Screen Example