SKF Microlog Frequency Response Function (FRF) Module

Creating non-animated mode shapes from Frequency Response Function module data imported into the Analysis and Report Module

Summary

This document describes the procedure for creating non-animated mode shapes from Frequency Response Function (FRF) data imported into the Analysis and Reporting Module (ARM). This is a technique known as “poor man’s modal”.

Procedure

Step 1: Start by importing the FRF data from the SKF Microlog using the Mobile Device Viewer.

Note: Make sure you have FRF files selected as the source (internal memory and SD card)

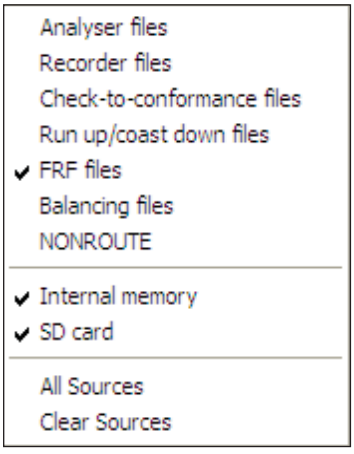

Figure 1. “FRF files” selected as the source.

Step 2: Highlight all the files for import and select **Next**.

Figure 2. Mobile Device Viewer window.

Step 3: All selected files will be transferred to the ARM's main window.

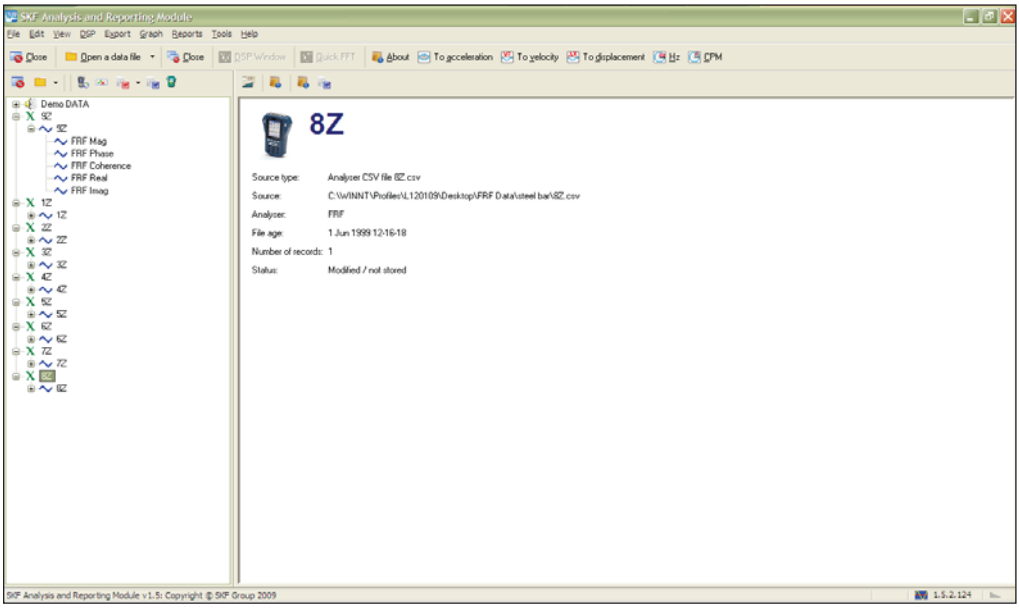

Figure 3. SKF Analysis and Reporting Module screen.

Step 4: Select trace 1 “X” and drag the FRF Imag spectrum onto a clear space of the data file window to create a new data file.

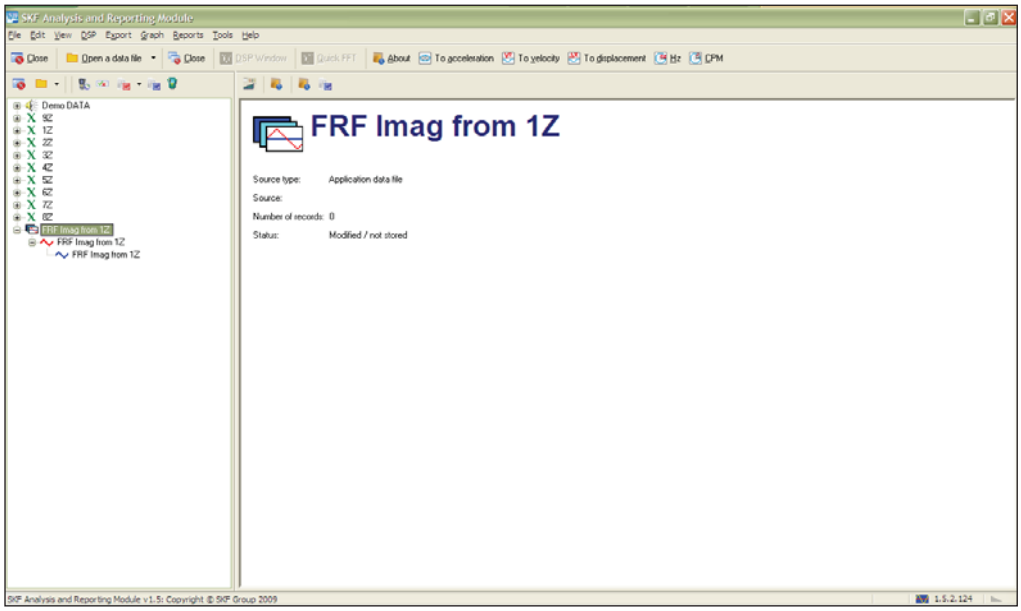

Figure 4. SKF Analysis and Reporting Module screen – creating a new data file.

Step 5: Copy all other FRF Imag spectra from the individual files into the FRF Imag from 1 “X” to create a group of spectra.

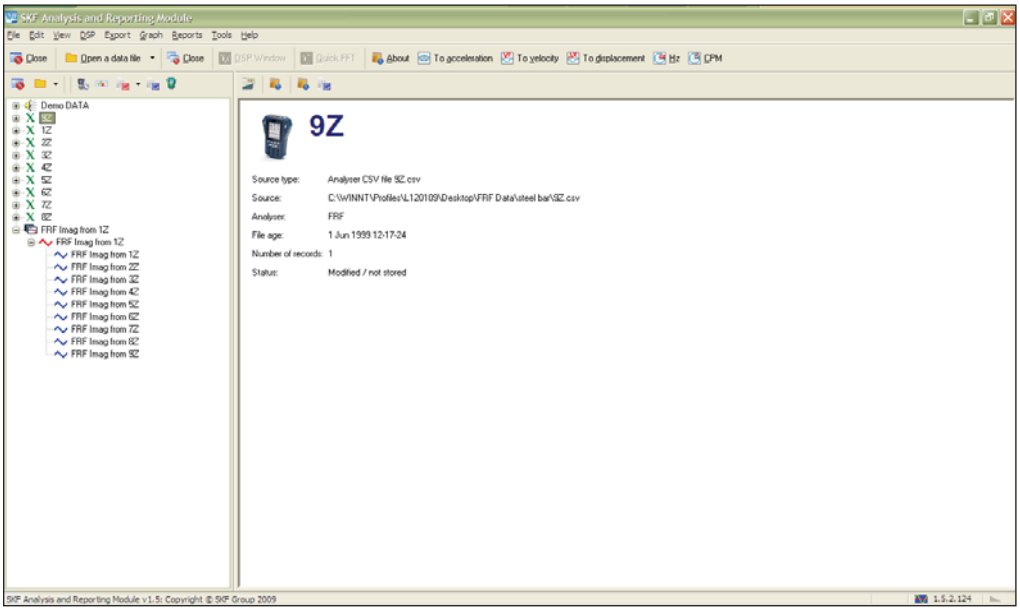

Figure 5. SKF Analysis and Reporting Module screen – creating a group of spectra.

Step 6: Select the second level of the group to select and view all traces.

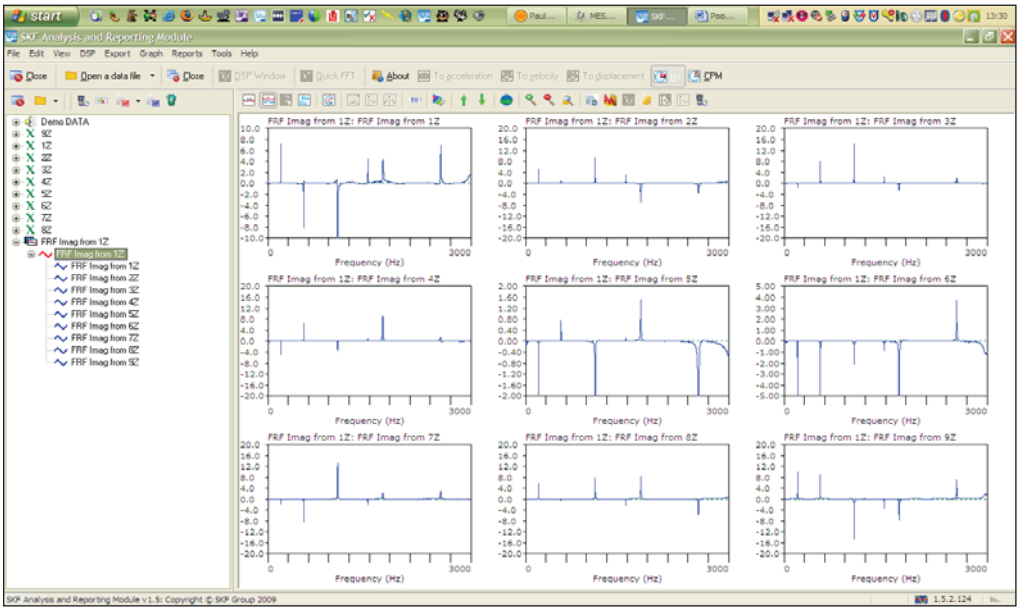

Figure 6. SKF Analysis and Reporting Module screen – viewing all traces.

Step 7: Using either the waterfall icon or selecting **Waterfall** from the **Graph, Change plot type**, change the view to a waterfall.

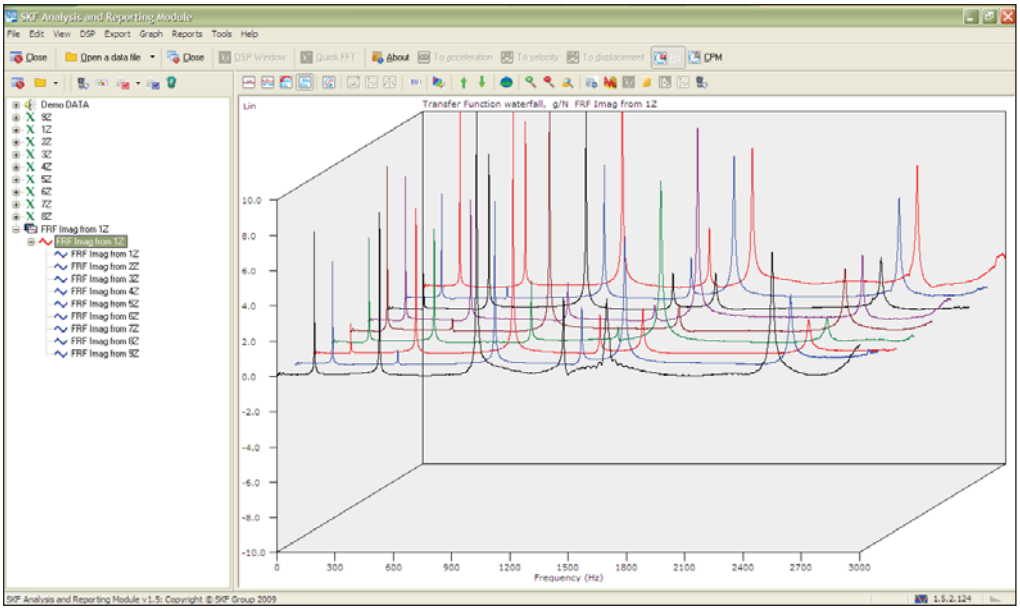

Figure 7. SKF Analysis and Reporting Module screen – viewing a waterfall.

Step 8: From the **Graph, Y axis, Scale** dropdown menu, select **Imaginary** to revert the plot to imaginary data.

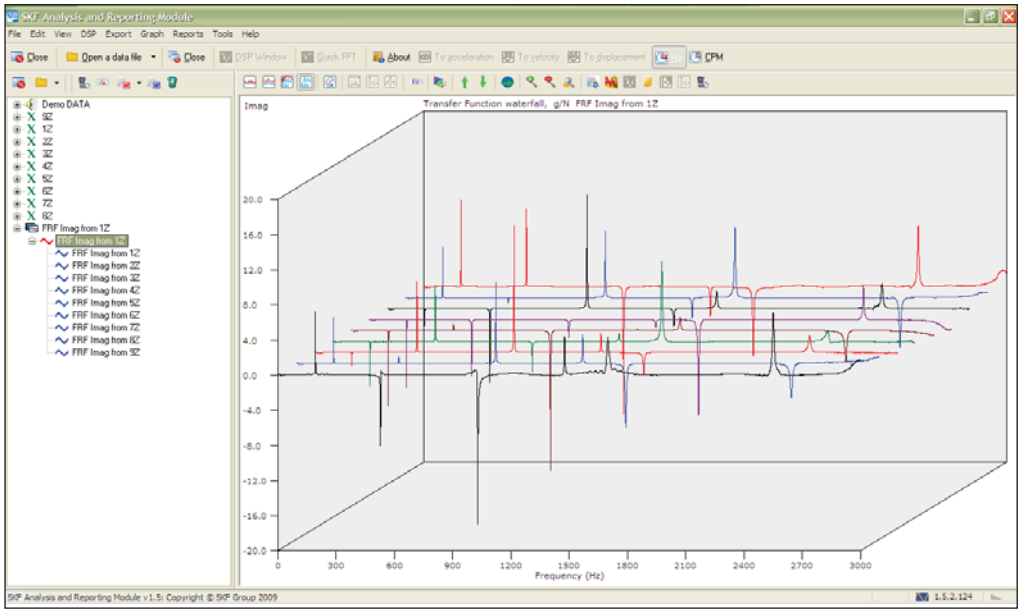

Figure 8. SKF Analysis and Reporting Module screen – viewing imaginary data.

Step 9: Move the cursor over a frequency of interest, right-click it and select **Waterfall Slice**.

Step 10: A new data window will display the mode shape of the selected frequency.

Note: This procedure will not show any torsional mode shapes; these can only be shown in MEScope.

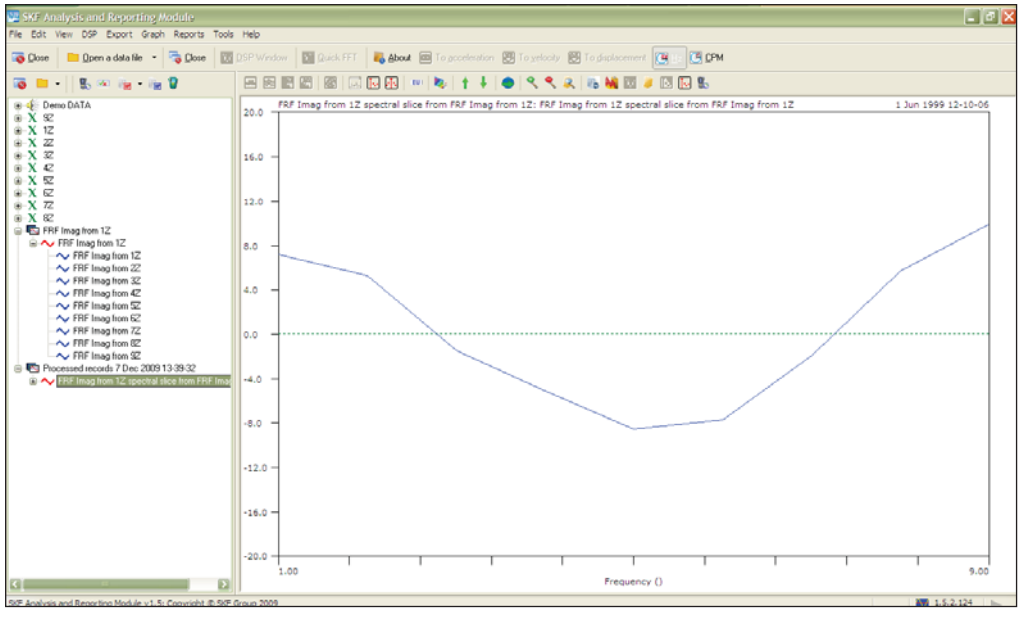

Figure 9. SKF Analysis and Reporting Module screen – viewing a waterfall slice.

Please contact:

SKF USA Inc.
Condition Monitoring Center – San Diego
5271 Viewridge Court · San Diego, California 92123 USA
Tel: +1 858-496-3400 · Fax: +1 858 496-3531

Web: www.skf.com/cm

PUB CM3143 EN · September 2011