

SKF Microlog Run up Coast down Module

How to use the demo data supplied with the SKF Microlog Run up Coast down module

Summary

Included with the Run up Coast down (RuCd) module are two files that are supplied to assist in demonstrating the features of the module. The two files are: **Demo_CoastDown.wav** and **Demo_CoastDown_sg.csv**. These files are installed in the **\Internal Disk\RUCD** directory of the instrument.

Opening the SKF Microlog Run up Coast down module and loading the Demo_CoastDown.wav file

Use the navigation keys to highlight the **RuCd** module and then press a fire key to launch it.



Figure 1. SKF Microlog keys and buttons, Home screen.



Use the navigation keys to highlight **Review Data** and then press a fire key (**Figure 2**). Use the navigation keys to highlight the **Demo_CoastDown.wav** file and then press the **F4 (Open)** function key (**Figure 3**).

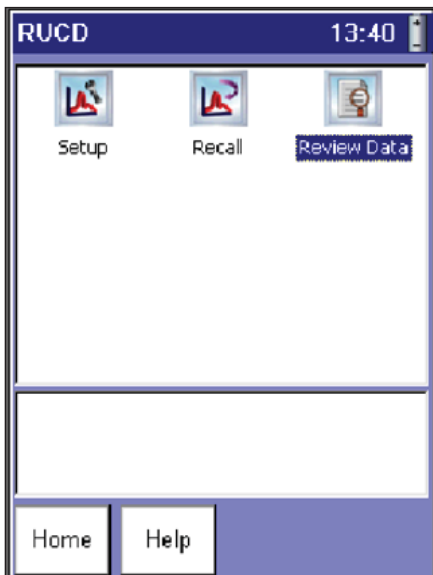


Figure 2. RUCD (Run up Coast down) screen.

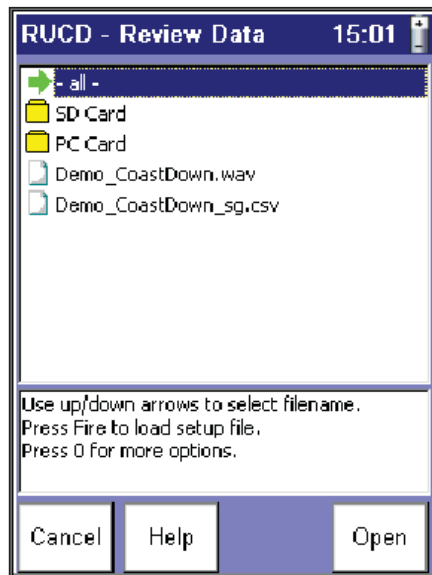


Figure 3. RUCD – Review Data screen.

Use the navigation keys to set the options as shown in **Figure 4** and then press the **F4 (Start)** function key. You are now ready to post process the data in any of the five options (**Figure 5**).



Figure 4. RUCD – WAV Setup screen.

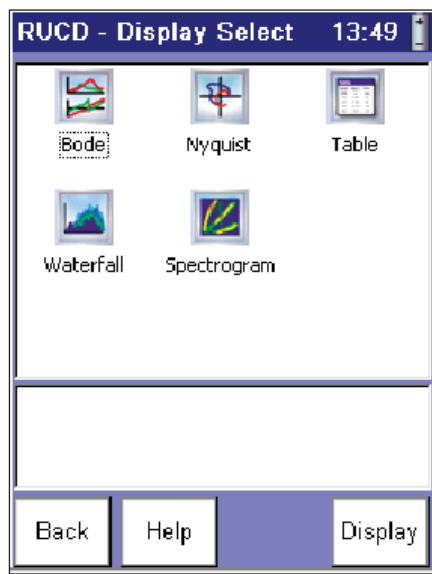


Figure 5. RUCD – Display Select screen.

Post processing the file as a table, Bode or Nyquist plot

From the **RUCD – Display Select** screen, use the navigation keys to select **Bode** and then press the **F4 (Display)** function key. Use the navigation keys to set the options as shown in **Figure 6** and then press the **F4 (Display)** function key.

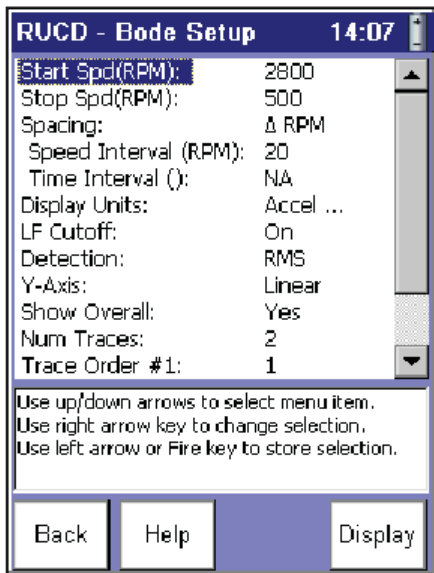


Figure 6. RUCD – Bode Setup screen.

Note: By selecting **Num Traces** to **2**, **Trace Order #2** is set by default to **2** and can be left as is (not shown on the screen above).

The RuCd module then processes the data and will take approximately 60 seconds to produce the trace. You now have a Bode plot showing the run down data. The overall vibration is plotted in red, the 1X in purple, and the 2 X in green.

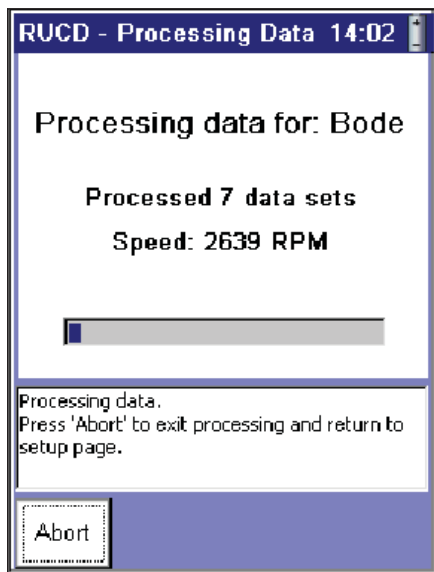


Figure 7. RUCD – Processing Data screen.

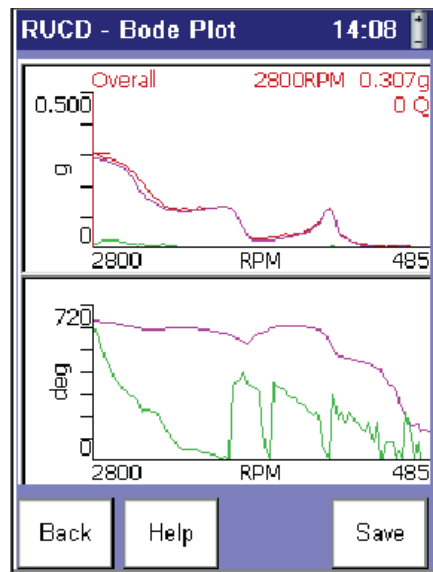


Figure 8. RUCD – Bode Plot screen.

When you move the cursor with overall highlighted, no cursor is displayed on the lower trace; with either 1X or 2X highlighted, the cursor tracks both traces and gives indication of amplitude, speed, phase and Q factor.

By pressing the **F1 (Back)** function key, you will return to the settings page. You can now set a log Y axis, as you may find log data easier to discuss. Press the **F4 (Display)** function key to display the traces. By pressing the **0** key, options to display the data as either a table (**F1**) or as a Nyquist plot (**F4**) are available. These options are held on screen for two seconds. If you do not select an option within that time, you will need to press the **0** key again.

Note: When you select either **Table** or **Nyquist**, the RuCd module does not need to process the data again – it changes the display instantly. To revert back to Bode from table or Nyquist, press the **0** key to display your options.

As a Nyquist plot, use the down arrow ▼ to switch between 1X and 2X; no overall display is possible.

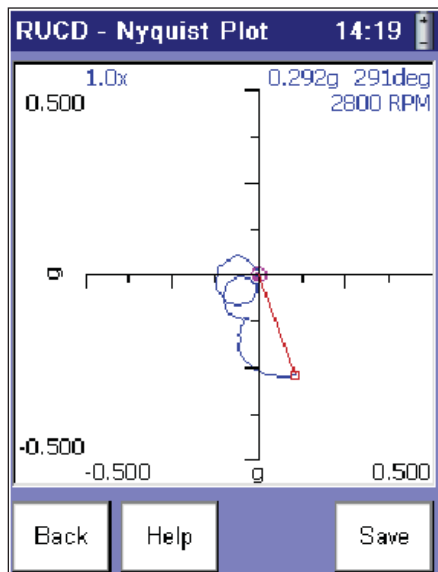


Figure 9. RUCD – Nyquist Plot screen.

Speed RPM	1x q	1x deg	2x q	2x deg
2800	0.292	291	0.015	267
2771	0.288	289	0.015	228
2743	0.286	285	0.019	171
2715	0.282	285	0.025	133
2688	0.278	282	0.024	80.9
2661	0.273	278	0.026	32.6
2635	0.269	275	0.024	7.12
2610	0.264	272	0.022	350
2585	0.257	268	0.020	329
2560	0.247	265	0.017	318
2536	0.235	261	0.016	305
2512	0.220	256	0.013	290
2489	0.200	254	0.011	279
2466	0.177	252	0.014	231

Figure 10. RUCD – Table screen.

Post processing the file as a waterfall or color spectrogram

From the **RUCD – Display Select** screen, use the navigation keys to select **Waterfall** and then press the **F4 (Display)** function key. Use the navigation keys to set the options as shown in **Figure 11** and then press the **F4 (Display)** function key. The RuCd module then processes the data and will take approximately 60 seconds to produce the trace.

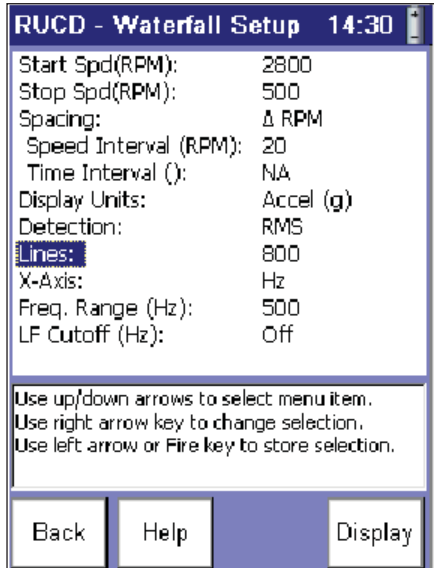


Figure 11. RUCD – Waterfall Setup screen.

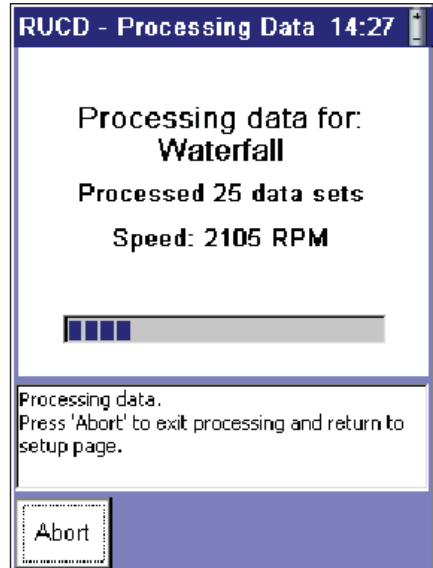


Figure 12. RUCD – Processing Data screen.

Use the navigation keys to set the options as shown in **Figure 13** and then press the **F4 (Display)** function key. Follow the on-screen instructions.

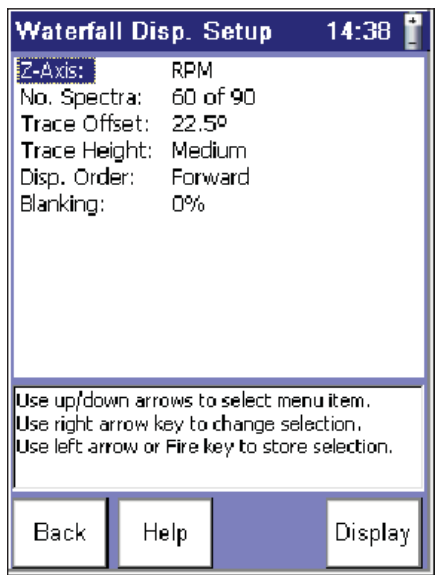


Figure 13. Waterfall Display Setup screen.

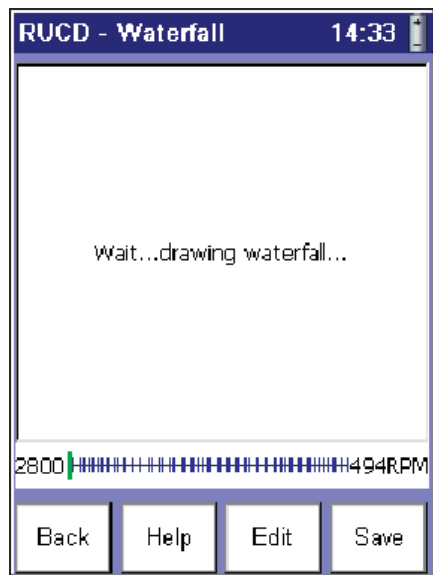


Figure 14. RUCD – Waterfall, Drawing Waterfall screen.

You can now use the navigation keys to track the data. By pressing the **0** key, the option to display the data as a spectrogram (**F1**) becomes available. This option is held on screen for two seconds. If you do not select it within that time, you will need to press the **0** key again.

Note: When you select **Spectrogram**, the RuCd module does not need to process the data again, but it does take a short while for the data to be displayed. To revert back to a waterfall, press the **0** key to display your options.

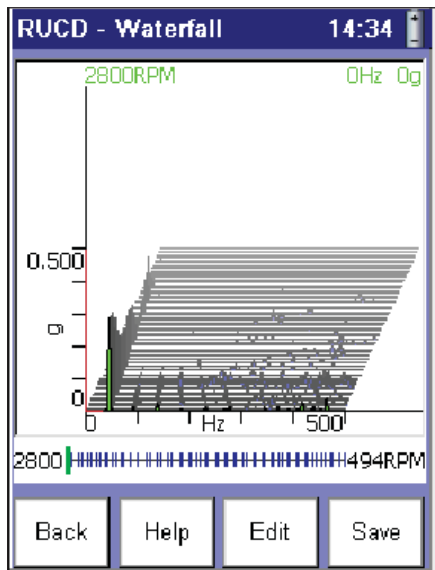


Figure 15. RUCD – Waterfall screen.

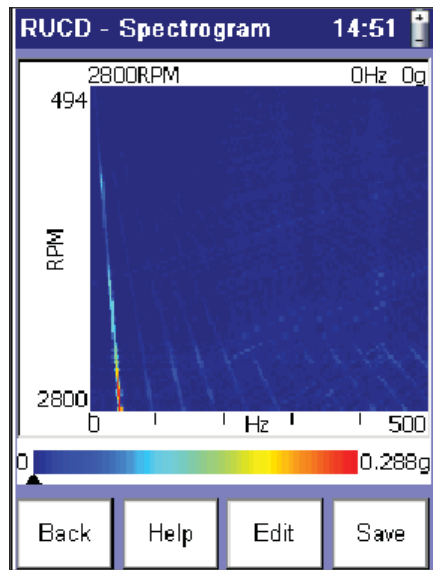


Figure 16. Color spectrogram.

Opening the SKF Microlog Run up Coast down module and loading the Demo_CoastDown_sg.csv file

The **Demo_CoastDown_sg.csv** file is a pre-processed color spectrogram plot for display purposes. The data can also be displayed using the waterfall, but cannot be reprocessed as a Bode or Nyquist plot.

From the main menu, use the navigation keys to highlight the **RuCd** module and then press a fire key to launch it. Use the navigation keys to highlight **Review Data** and then press a fire key (**Figure 17**). Use the navigation keys to highlight the **Demo_CoastDown_sg.csv** file and then press the **F4 (Open)** function key (**Figure 18**).

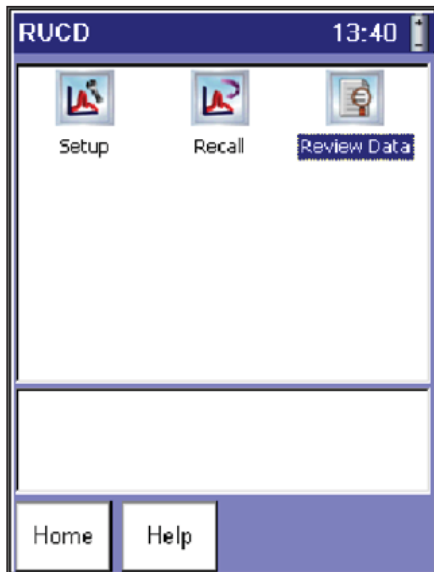


Figure 17. RUCD screen.

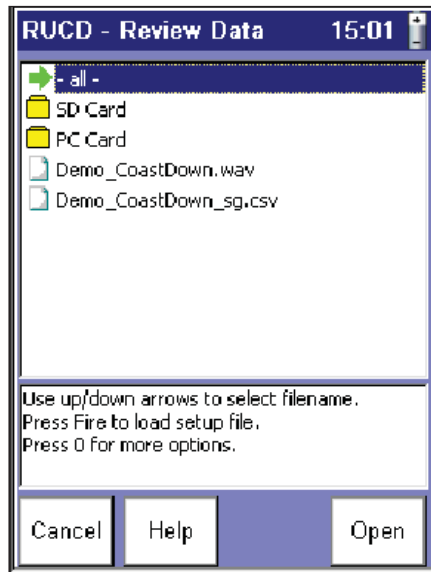


Figure 18. RUCD – Review Data screen.

Leave the options as shown in **Figures 19** and **20**; just press the **F4 (Display)** function key. After a few seconds, the color spectrogram will be displayed (**Figure 21**).



Figure 19. RUCD – Spectrum Setup screen.



Figure 20. Spectrum Display Setup screen.

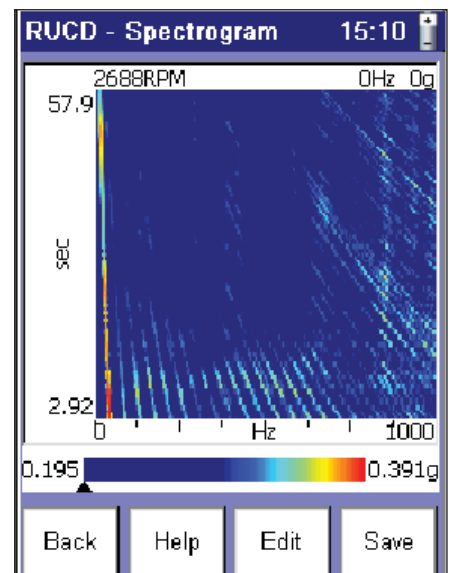


Figure 21. Color spectrogram.

By pressing the **0** key, the option to display the data as a waterfall (**F1**) becomes available. This option is held on screen for two seconds. If you do not select it within that time, you will need to press the **0** key again.

Note: When you select **Waterfall**, the RuCd module does not need to process the data again, but it does take a short while for the data to be displayed. To revert back to a spectrogram, press the **0** key to display your options.

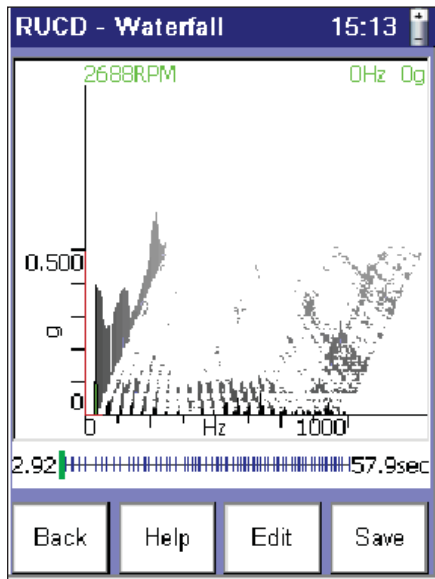


Figure 22. Waterfall plot.

Note: The directions in this application note are to get you started. Please feel free to change any of the settings and “experiment” to see how the data looks. If you find a display that looks just how you want it, save it and use it instead of the **Demo_CoastDown_sg.csv** file.

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