

Streamlined & Efficient Process of Viewing Signals Acquired in Vibration Tests

Application Note 048



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Engineering Data Management (EDM) is the software platform supporting all Crystal Instruments products. It is the center of testing and data management for carrying out daily operations. Crystal Instruments is expending relentless efforts to provide the best user experience possible.

Test configurations always involve a large quantity of parameters to setup. In addition, many signals and run logs are saved after each test run. To organize such a large quantity of information and to increase efficiency in the process, EDM is powered by a database structure supporting all types of libraries. EDM software keeps run histories of all tests, which can be searched in a single list. Signals are easily reviewed and compared.

The repetitive manual addition and removal of signals to the display becomes a tedious task. (The purpose of this task is for viewing purposes or for comparisons of the same signals saved in different files.) The **Review and Compare** mode in EDM streamlines the process, rescuing us from the sheer boredom and inefficiency.

Review mode is used to recall multiple signals of one saved file to the current display layout and scrolls through all the files one by one. **Compare** mode displays the last state of live signals in addition to multiple recalled signals. Since there is not a big difference, the following discussion of Review mode is also applicable to Compare mode.

Review mode is useful for viewing the same set of signals saved in multiple files from different runs. Typical applications include comparing saved pulses in Shock tests, saved sweeps in Sine tests, and saved spectra in the Random tests over the test duration. Review

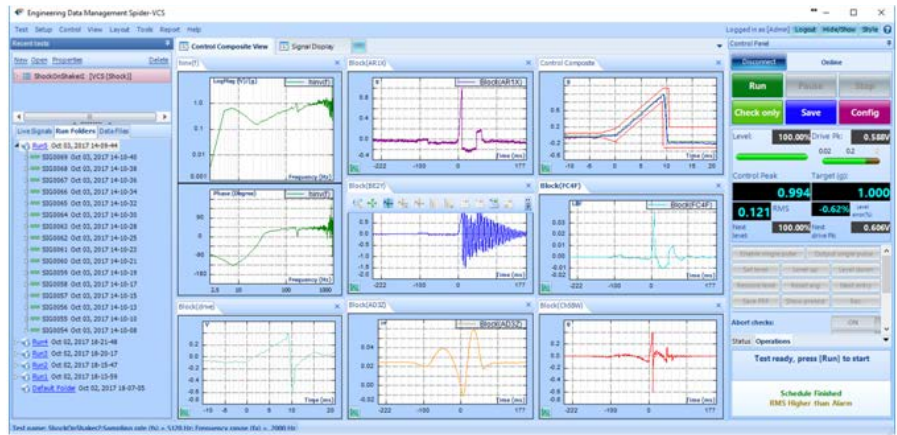


Figure 1.1

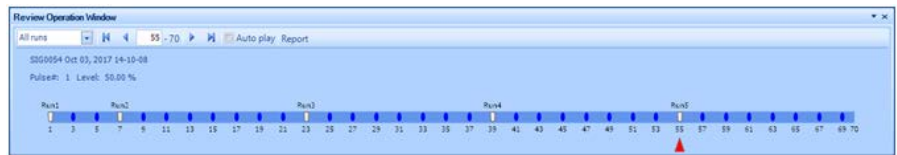


Figure 1.2



Figure 1.3

mode is only available when a test is stopped. Before entering Review mode, set up the display layout to show desired signals. The display layout is inherited in Review mode. For example, if the current layout shows live signals of the last status of the test, it will be kept in Review mode. (Figure 1.1)

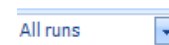
In Review mode, signals on the display layout are replaced by corresponding signals in the saved file. The floating **Review Operation Window** allows users to select which signal file's signals are displayed and generates a simple report including those selected runs. (Figure 1.2)

There are three control areas on the **Review Operation Window**.

1. A control bar is located on the bottom middle of the Review Operation Window. Each marker on the bar represents a file. A white marker indicates the first file in the

run and the rest are blue markers. Some markers may be hidden due to the window length. The red arrow indicates the displayed signal file. The user can select a signal file to be displayed by clicking on a marker. The selected signal file will also be highlighted in the **Run Folders** tab on the left bottom panel. (Figure 1.3)

2. On the top of the toolbar is a drop-down menu with report function and navigation selections. The drop-down menu provides an option to show all runs or a single run.



The report function generates reports, including selected signal files and selected contents, which are generated in a pre-configured report template. (Figure 1.4)

The navigation buttons allow users to scroll through signal files one by one. Users can also enter a number to jump to the file. Checking the Auto Play box enables automatic scrolling through the signal files. (Figure 1.5)

3. The mid section displays the file name along with the time it was saved, the test level, and the number of pulses, sweeps, or elapsed time.

SIG0054 Oct 03, 2017 14-10-08
Pulse#: 1 Level: 50.00 %

In Review mode, it will never be difficult to glance through all the test data. This simple yet powerful tool examines the test process, troubleshoots, and analyzes data with ease. (Figure 1.6)

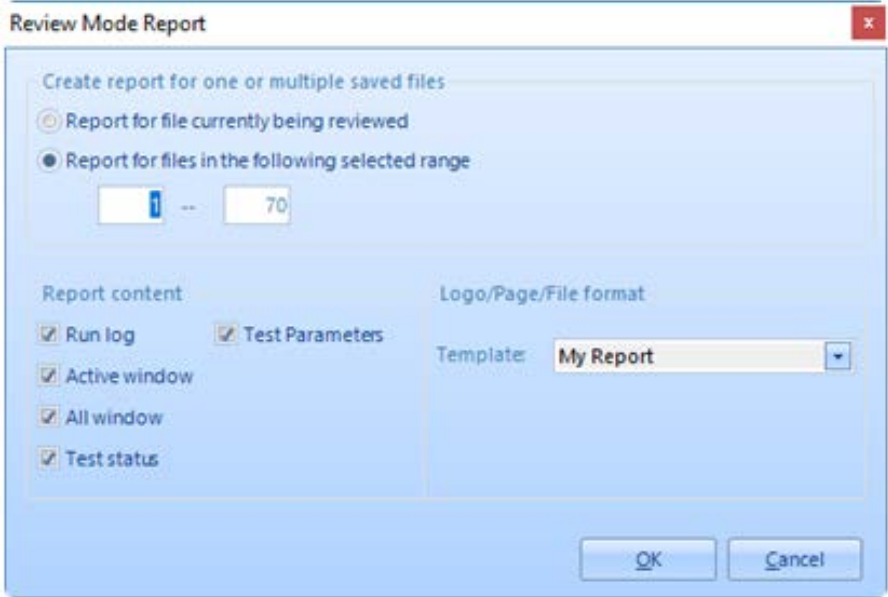


Figure 1.4



Figure 1.5

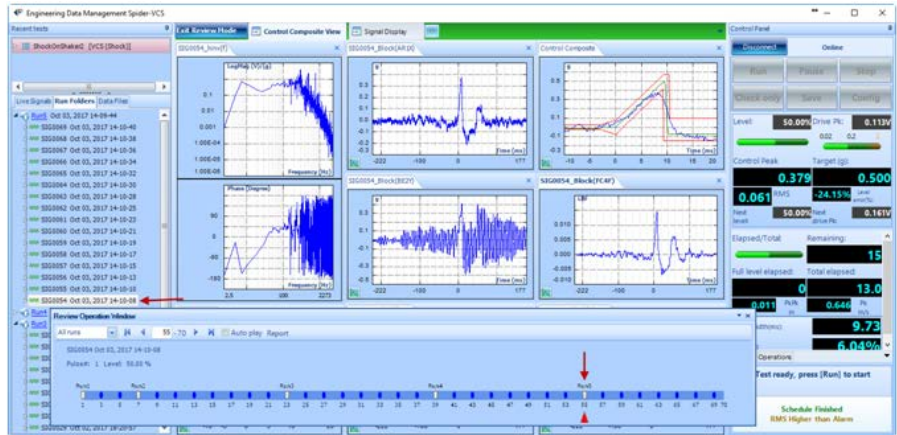


Figure 1.6

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