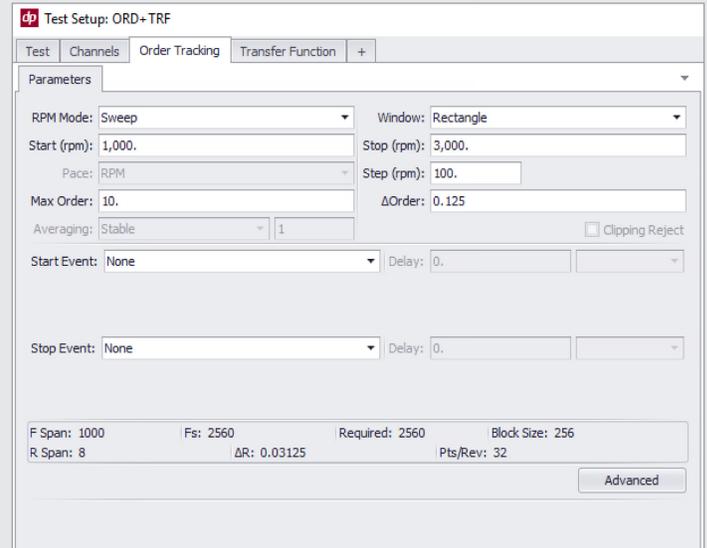# Multi Measurement

DP930-81

Testing often requires multiple analyses on the same test article. The Multi Measurement option adds the ability to run multiple measurement types or measurements of the same type with different parameters simultaneously during a test. For example, a signal analysis test can be run using an Order Tracking measurement with angle domain sampling and a Transfer Function measurement with fixed frequency sampling at the same time. In another example, a random vibration control test can be run with the required random control bandwidth while a higher bandwidth FFT measurement can be made to evaluate out of band energy.
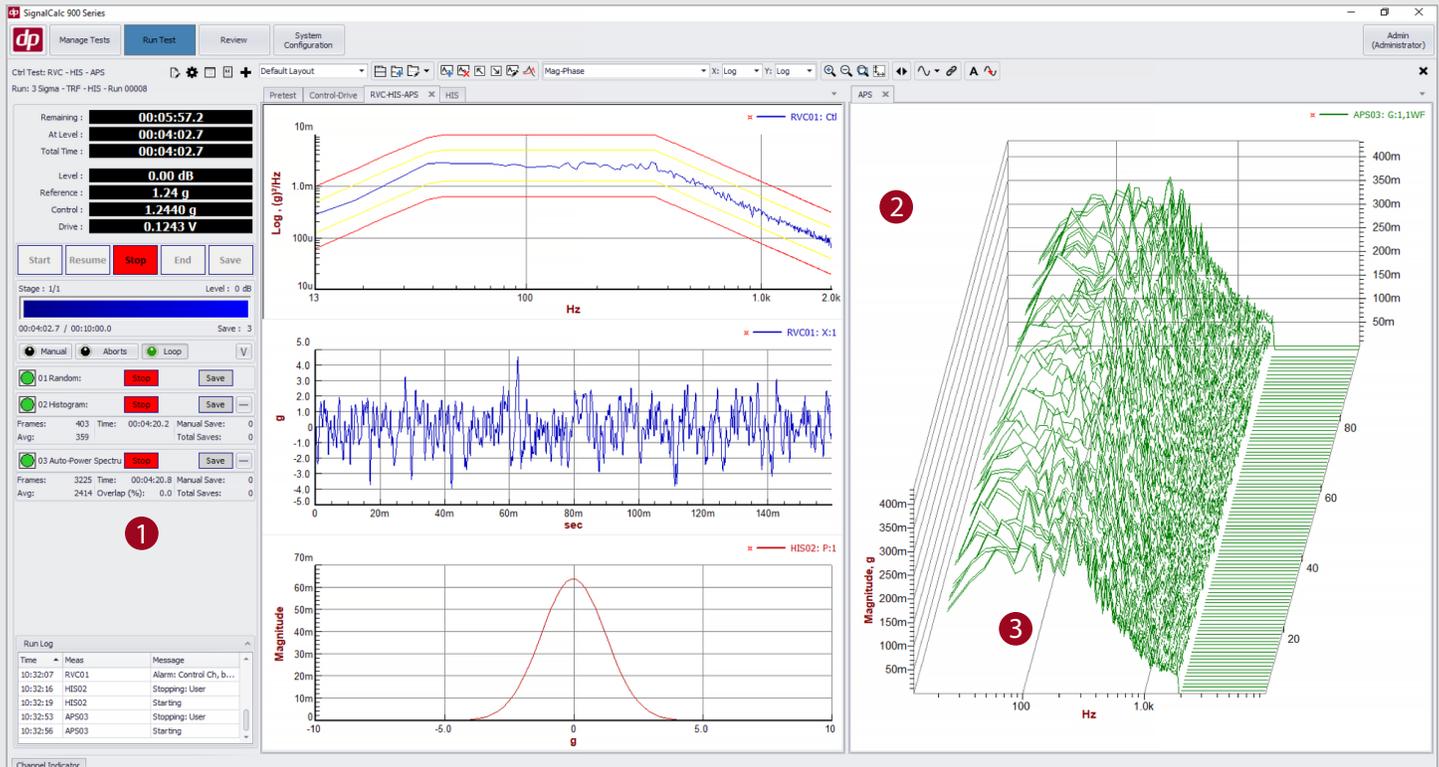
The input channels processed by each measurement are individually selected from active channels. The same channel can be processed using different measurement types. Data from all measurement types can be displayed and overlaid during the test and saved for post-test analysis.

Features and Benefits

Feature	Benefit
Multiple simultaneous measurements	Streamline testing process by combining multiple tests into a single test
Completely independent measurements	Concurrent measurements are defined independently with different sample rates, frequency lines, and processing settings
Realtime distributed signal processing	Run multiple measurement types simultaneously, regardless of channel count
Live displays of multiple measurement types	Data from multiple measurement types can be displayed on the same screen and overlaid live during the test
Test data management and review	Data from multiple measurements are saved within the same Run making management of data and post-test analysis easier
Processing during vibration control	Additional measurements can be executed during a shaker control test, eliminating the need to post process shaker test data
Post-test data review	Data saves are tagged with time of save for easy comparison of different measurement types. Multiple data saves can be overlaid with a single click.
Time data recording	Multiple measurements running concurrently do not prevent recording of raw time data (DP930-23)

Efficient Testing and Analysis

1 Measurement Control
Independently start, stop, and save data for each measurement.

2 Live Data Display
Data from all measurement types is available for live display and overlay in the same graphs.
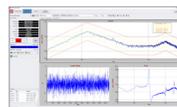
3 Simultaneous Control & Analysis
Random Control, Auto Power Spectrum (waterfall) and Histogram analysis.
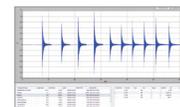
Related Applications

FFT Analysis
DP930-10

Acquire and analyze data using auto and cross spectrum, transfer function, auto and cross correlation, histogram, and synchronous averaging

Random Vibration Control
DP960-10

Control a shaker to reproduce a specific vibration environment described by a power spectral density (PSD) profile

Recording and Playback Analysis
DP930-23

Record data up to 200 k samples/ second simultaneously with real-time measurement or control

NOTE: Continued product improvement necessitates that Data Physics reserves the right to modify these specifications without notice.