

Chapter 10 Real-time Data Recorder & Playback Analysis

10.1 Overview

In VibExpert 2.3.30 and subsequent versions, **Real-time Data Recorder & Playback Analysis** function is available for each control application module. **Real-time Data Recorder** function records streamless time-domain signal for each settled channel, then generates a **Record File**. In **Playback Analysis** function, users can further comparison and analysis on recorded signals.

We take **Sine Test** as an example here. **Real-time Data Recorder & Playback Analysis** is divided into two parts: **Real-time Data Recorder & Playback Analysis**.

10.2 Real-time Data Recorder

- (1) Open the software, click **Sine** on **Start Page**, and enter into the **Sine Test** module.
- (2) Click menu bar **Data Record-Setup**, as shown in Figure 10-1. In **Data Record Setup** options page, check **Enable Data Record**, check the channels need to data record, check **Start recoding at the beginning of test** or not, as shown in Figure 10-2.

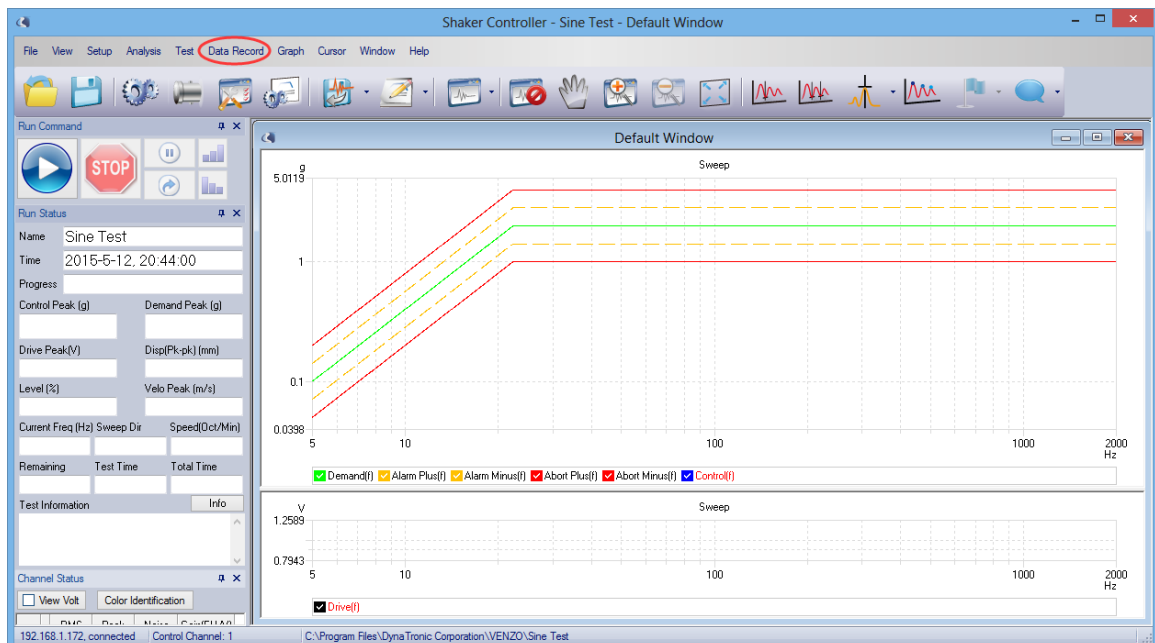


Figure 10-1

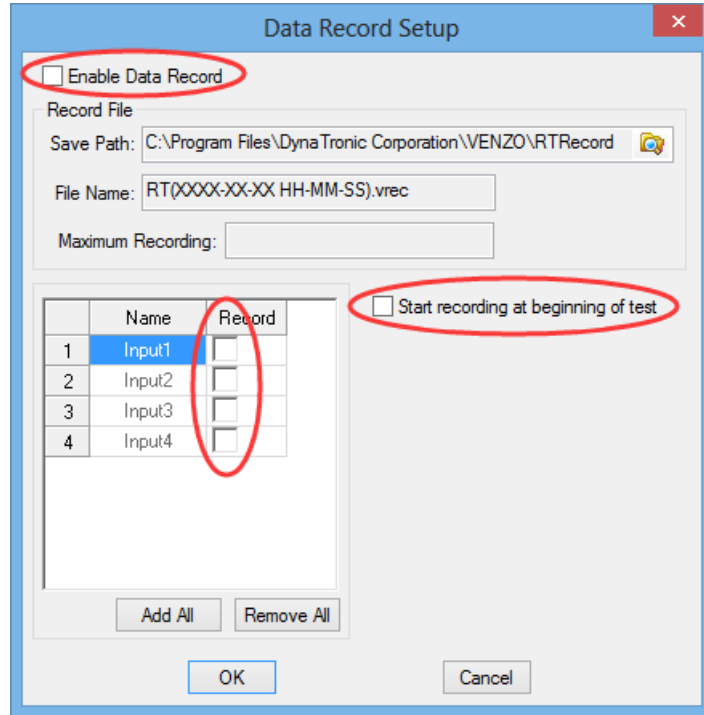


Figure 10-2

(3) Start test, if check **Start recording at the beginning of test**, then software will record data at the beginning of the test automatically; if not, then users need to start recording manually. During the test, users can **Stop, Pause, and Continue** data record. As shown in Figure 10-3.

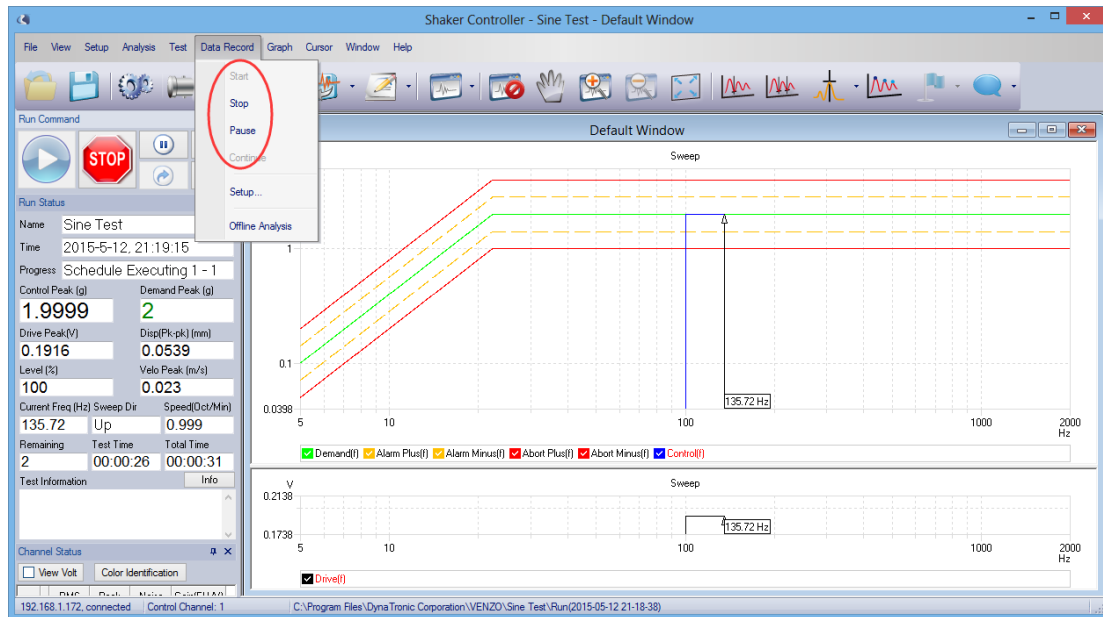


Figure 10-3

10.3 Playback Analysis

(1) In the Start Page, shown in figure 10-4, select Playback Analysis, you can enter Playback Analysis module, as shown in figure 10-5.



Figure 10-4

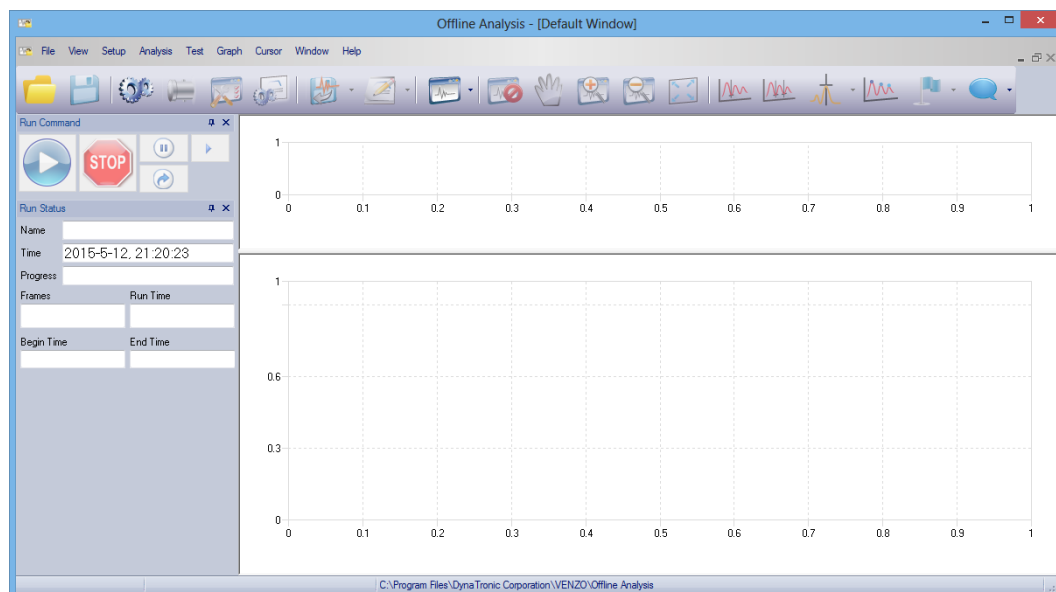



Figure 10-5

(2) Click **File-Open Record File**, in **Open Record File** dialog box, click button , choose **Record File**, and the default path is the **RTRecord** in the installation directory, click **Add**, user can open four **Record File** at the same time. As shown in Figure 10-6 and Figure 10-7.

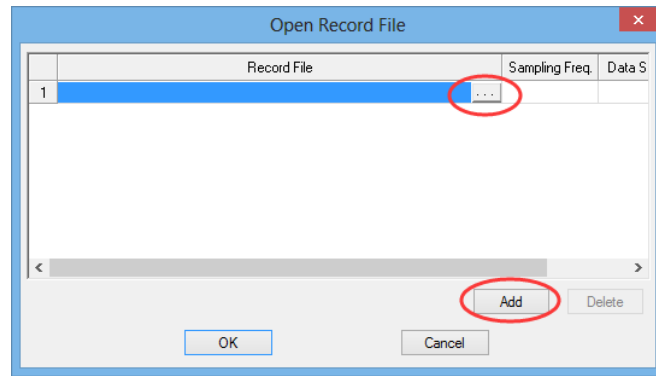


Figure 10-6

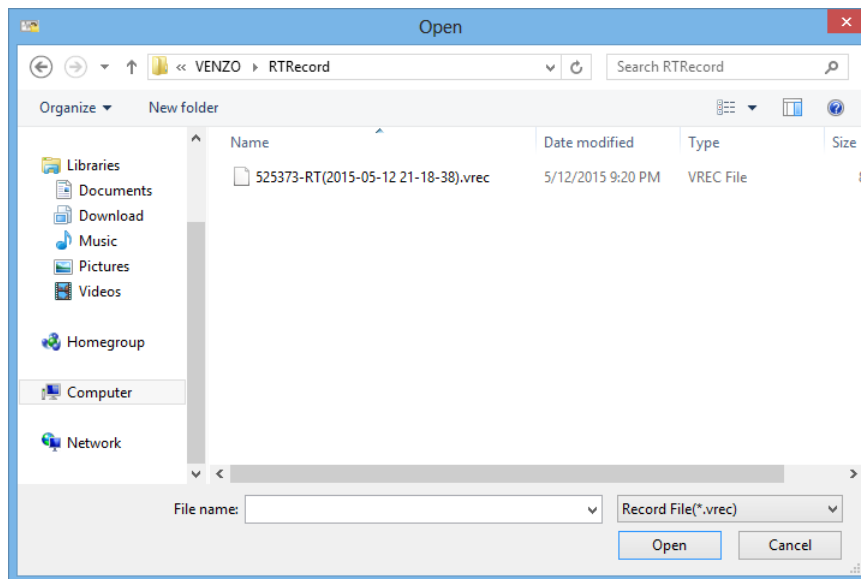


Figure 10-7

(3) Click  button, open **Control Parameters** options page, as shown in Figure 10-8

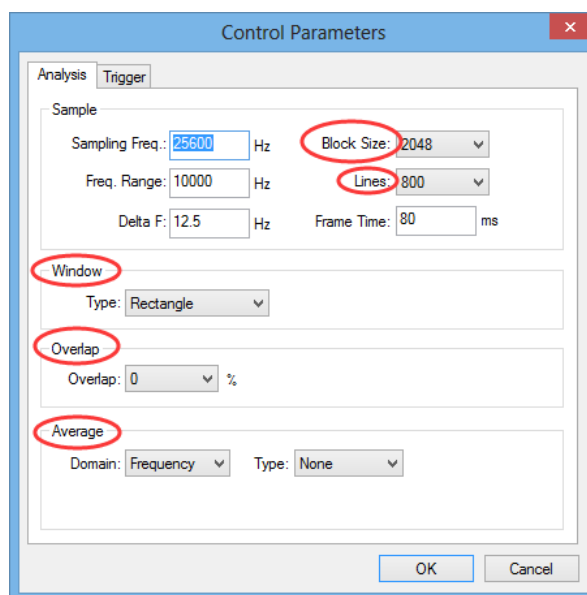


Figure 10-8

In **Control Parameters-Analysis** options page, users can select **Block Size** and **Lines** manually; users can select the type of window applied to the channel time-domain signal, and it's benefit to FFT Calculation; Overlap is for users to choose the overlap rate between two adjacent frame signals, and it's often applied to the random signal; Average is applied to the average of the time-domain and frequency-domain signal, and it's often applied to the random signal.

(4)Click **Trigger**, users can choose **Source/ Run Mode/ Slope**, and set the **Level** and **Delay** manually. As shown in Figure10-9.

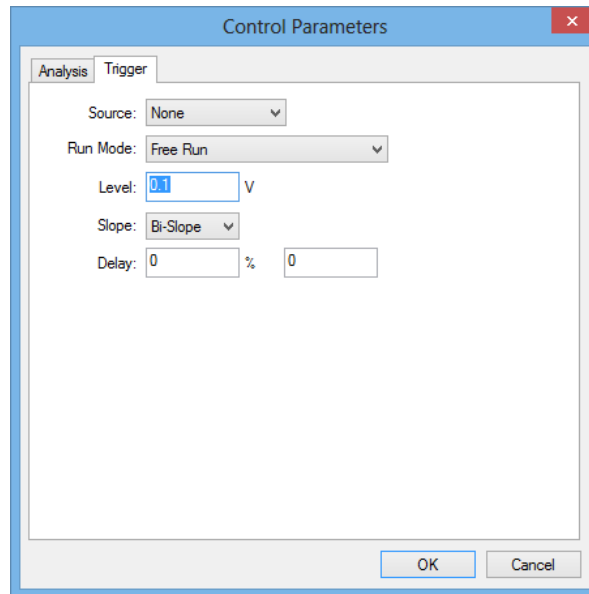



Figure 10-9

(5)Click button , open **Edit Test** dialog box, users can analyze **Time/ FFT/ APSD/ CPSD/ Acorr/ Ccorr/ FRF/ Coherence**, as shown in Figure 10-10.

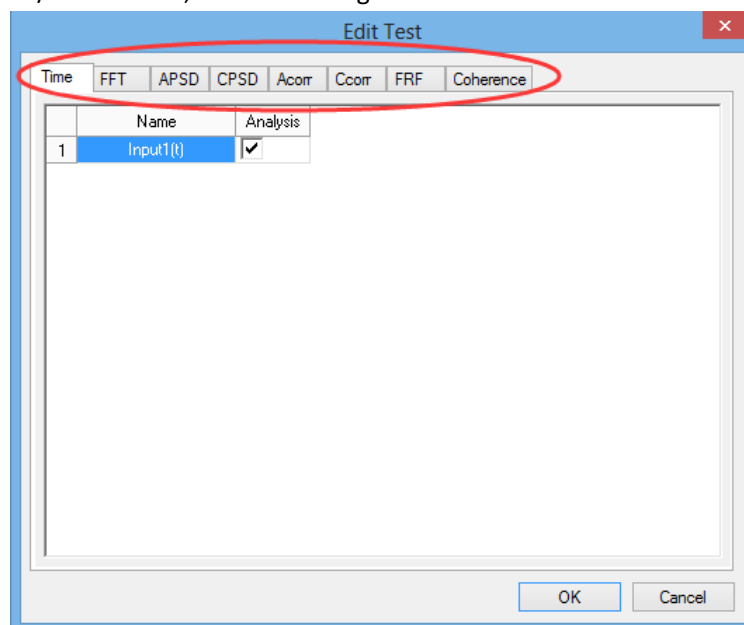


Figure 10-10

(6) Start test, as shown in Figure 10-11 and 10-12.

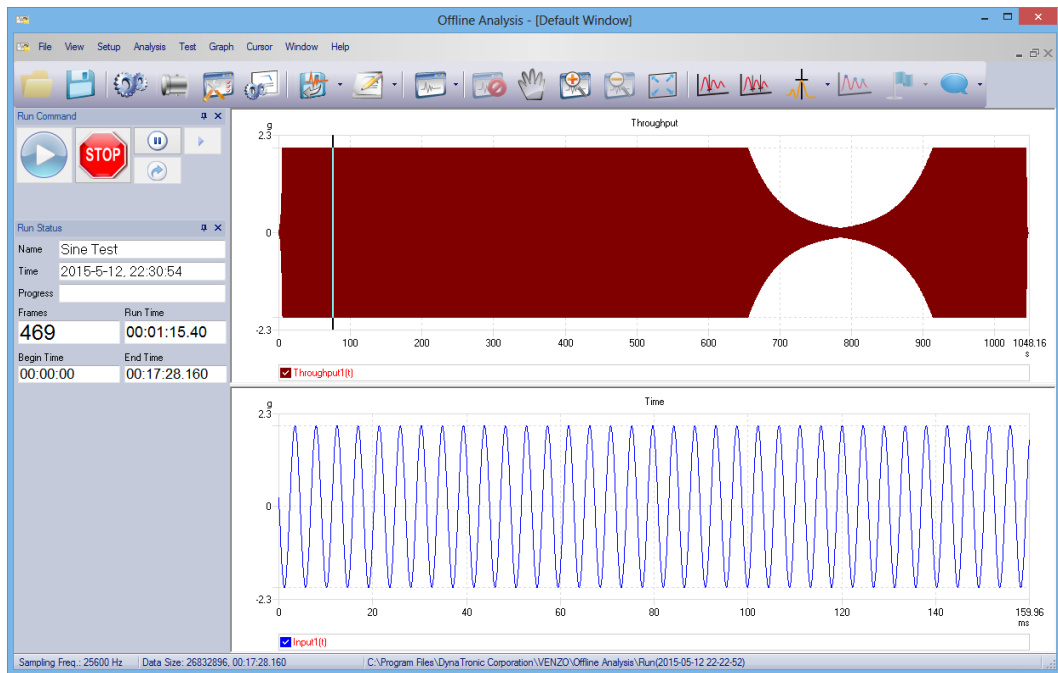


Figure 10-11

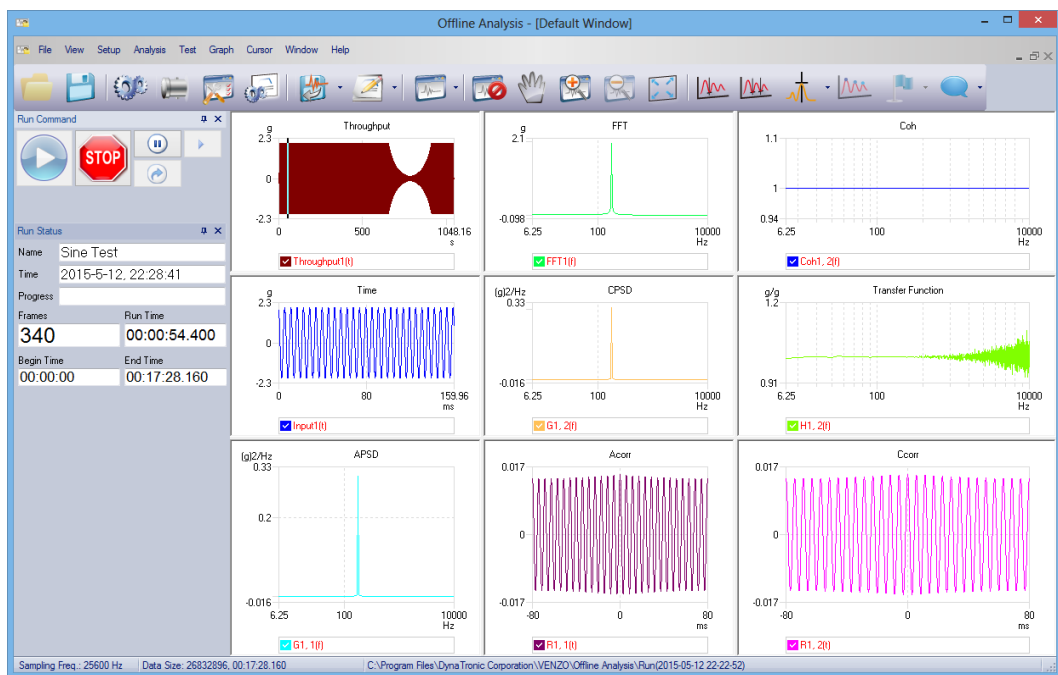


Figure 10-12