

DS-0321 FFT Analysis Software

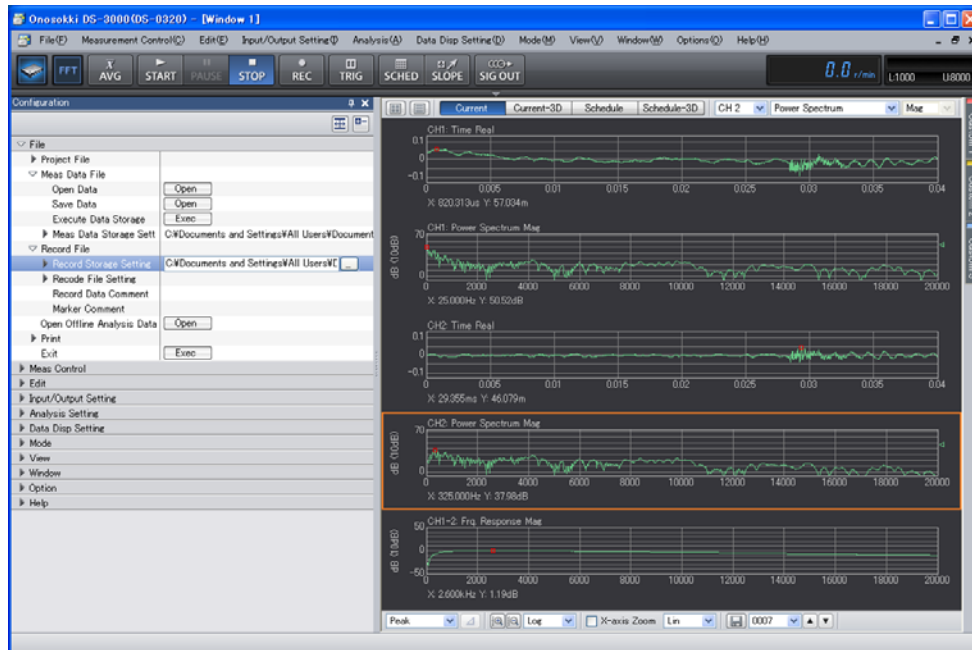
Operation manual

Operation Procedures for Data Recording

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This document provides general operating procedures for data recording. Data recording operations may be made while the system is being used for various analyses.

The following figure shows the case data recording is made while the data is analyzed for the power spectrum and frequency response function. Note that recorded data can be analyzed offline, using the same operation procedures as used for real-time (online) analysis.



Here, the operation procedures are described assuming the case the input signal is branched and supplied to both channels 1 and 2, with the data (for channel 1, the input filter is FLAT and for channel 2, the A-characteristic filter is turned on) recorded for 5 seconds repeatedly.

Basic operation procedures required for offline analysis are not covered in this document. For such procedures, refer to respective operation manuals.

This manual explains what type of behavior will result from a single operation, thus it is recommended to try various operations with the software.

Basic operations of the DS-3000 software are mostly executed in the "Configuration" window. As the operations in the "Configuration" window are correspondent with those of the Main menu, the Main menu operations are not included in this manual. For details on the "Configuration" window operation, refer to the respective procedure manuals ("[Basic Operation of Configuration Window](#)")

In this instruction manual, a series of clicking operations is described, for example, as follows: Click "File" > "Project File" > "New Project" > "".

■ Operation Flow

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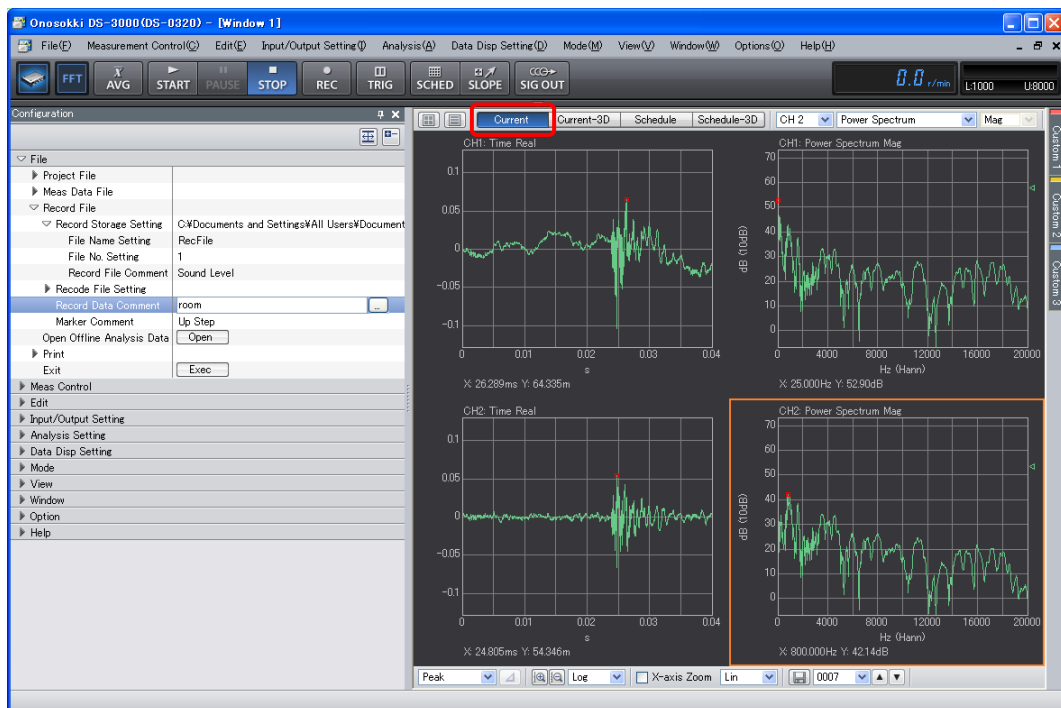
■ Operation Procedures

-1 Startup

Connect relevant systems as appropriate, power on the system, and startup the DS-0321 FFT Analysis software.

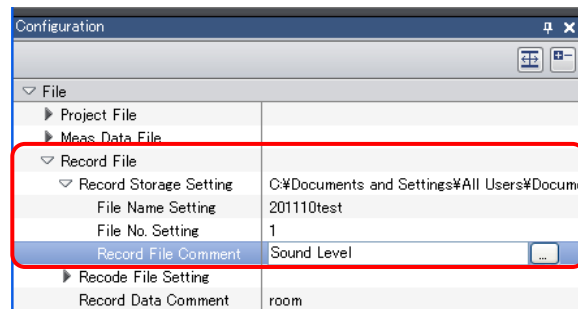
-2 Setting Analysis Conditions

- ① From the main menu, click "View" > "Configuration" to open the "Configuration" window.
- ② In the "Configuration" window, specify the analysis conditions such as "Frequency Range", "Voltage Range", "Unit", and "Calibration". It will be convenient for offline analysis if the frequency range is specified somewhat wider than actually required, as the analysis range may be later changed as appropriate, e.g., to make the division of the analysis range easier. The following figure shows the time waveform and the corresponding power spectrum for the CH1 and CH2 signals. The "REC" button (i.e., recording function) on the main tool bar is enabled only when the "Current" button on top of the graph window is selected.

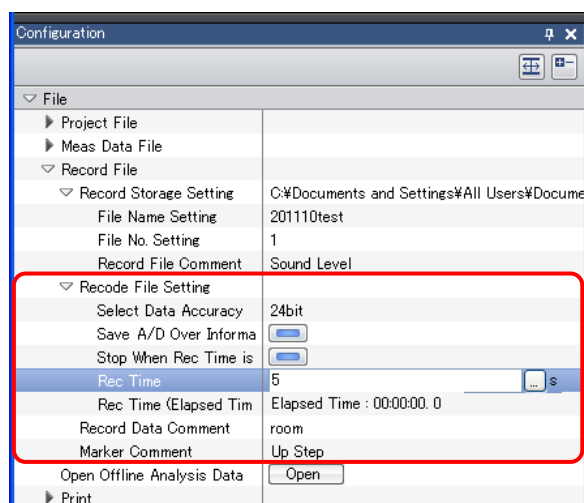


-3 Setting for Record File

- ① Click "STOP" button on the main tool bar to turn it on.
- ② In the "Configuration" window, click "File" > "Record File" > "Record Storage Setting" and set the parameters as appropriate. By specifying the "File Name Setting" and "File No. Setting" fields, the file will be saved in the folder specified by "Record Storage Setting", in the file name "201110test_001.orf", in the case of this example. Note that the text entry in "Record File Comment" will be displayed in the bottom part of the screen to provide file information.

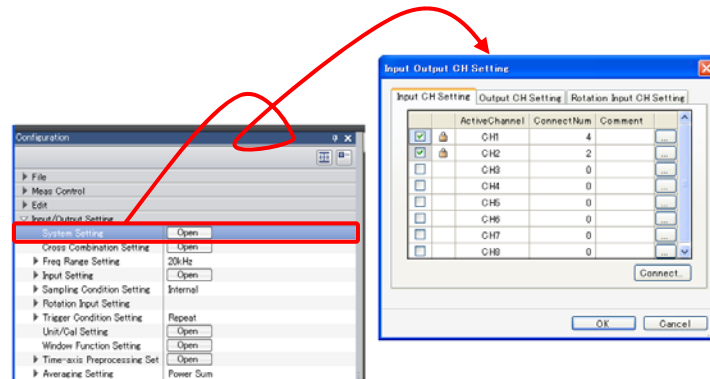


- ③ In the "Configuration" window, click "File" > "Record File" > "Record File Setting" and set the parameters as appropriate. Using "Select Data Accuracy", the accuracy (resolution) of A to D conversion (i.e., 16 bit or 24 bit) can be selected. Selecting 16 bit can reduce the size of the file. Set the "Save A/D Over Information" button to ON. Set "Rec Time" to 5 seconds (i.e., each record will contain 5 seconds of data). Then, set "Stop When Rec Time is Over" to ON to enable the "Rec Time" setting. Note that the text entry in "Record Data Comment" will be displayed as a remark for the file name. Regarding the "Marker Comment", clicking the marker button while recording data will record the marker. The recorded marker position can be checked by opening the file view during offline analysis.



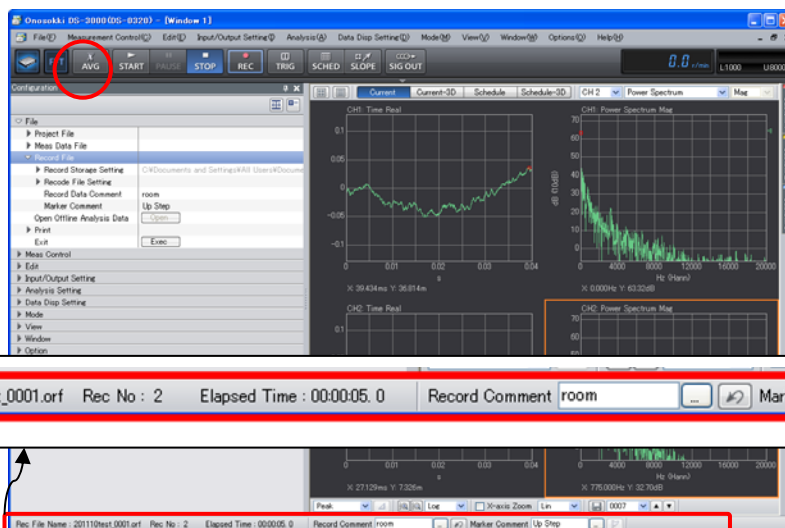
-4 Setting for Recording Channel

- ① In the "Configuration" window, click "Input/Output Setting" > "System Setting" → "Open" to open the "Input Output CH Setting" dialog box. In the "Input CH Setting" tab in the "Input Output CH Setting" dialog box, check the checkbox only for the input channels of which data is to be saved, and remove any check for other channels. By checking only the channels of which data is to be saved, the file size can be reduced. In the figure below, only CH1 and CH2 are checked.

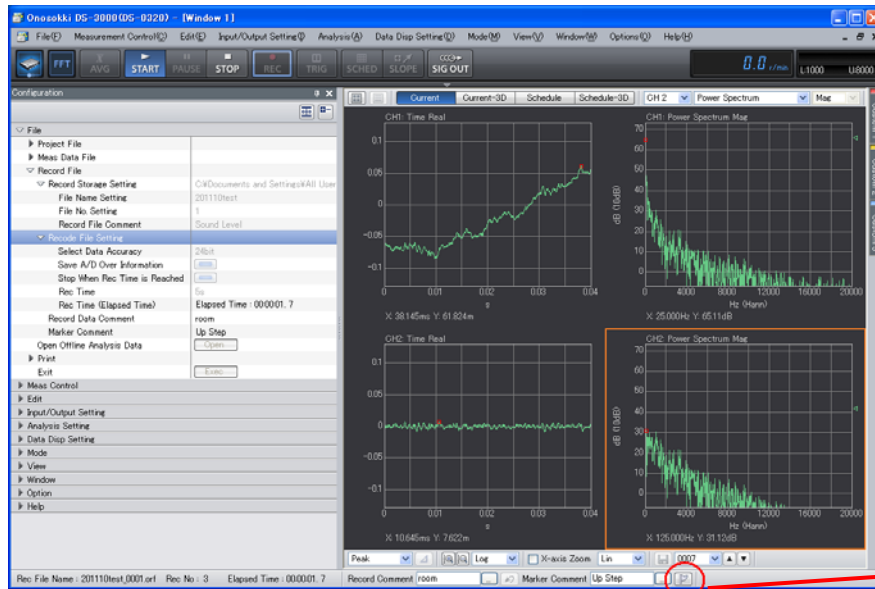


-5 Start Recording

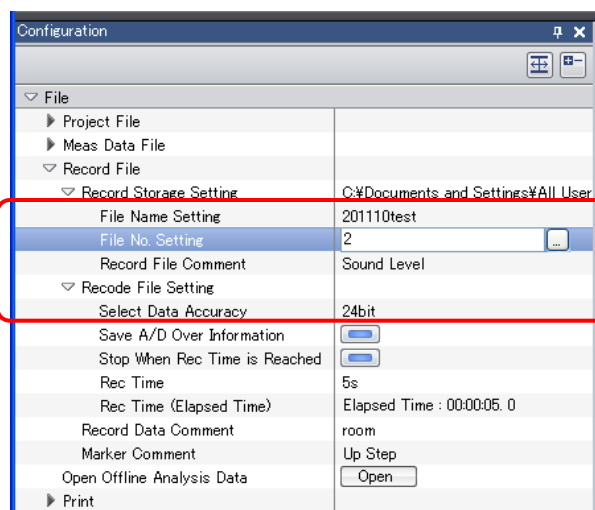
- ① Click the "REC" button on the main tool bar to turn it on. When the system is ready, the red recording indicator on the button turns on.
- ② Click the "START" button on the main tool bar to turn it on. It will start recording the data. When the recording time of 5 seconds as set in "Rec Time" has passed, the recording will be terminated. The data recorded will be saved as "Record No. 1". When the system is ready, the red recording indicator on the button turns on. The recording information will be displayed at the bottom of the window. The "Rec No: 2" indication means that the next measurement will be recorded as "Record No. 2".



- ③ To continue recording, click the "START" button to turn it on.
- ④ To include a marker, click the marker tool at the bottom of the window at this point in time.



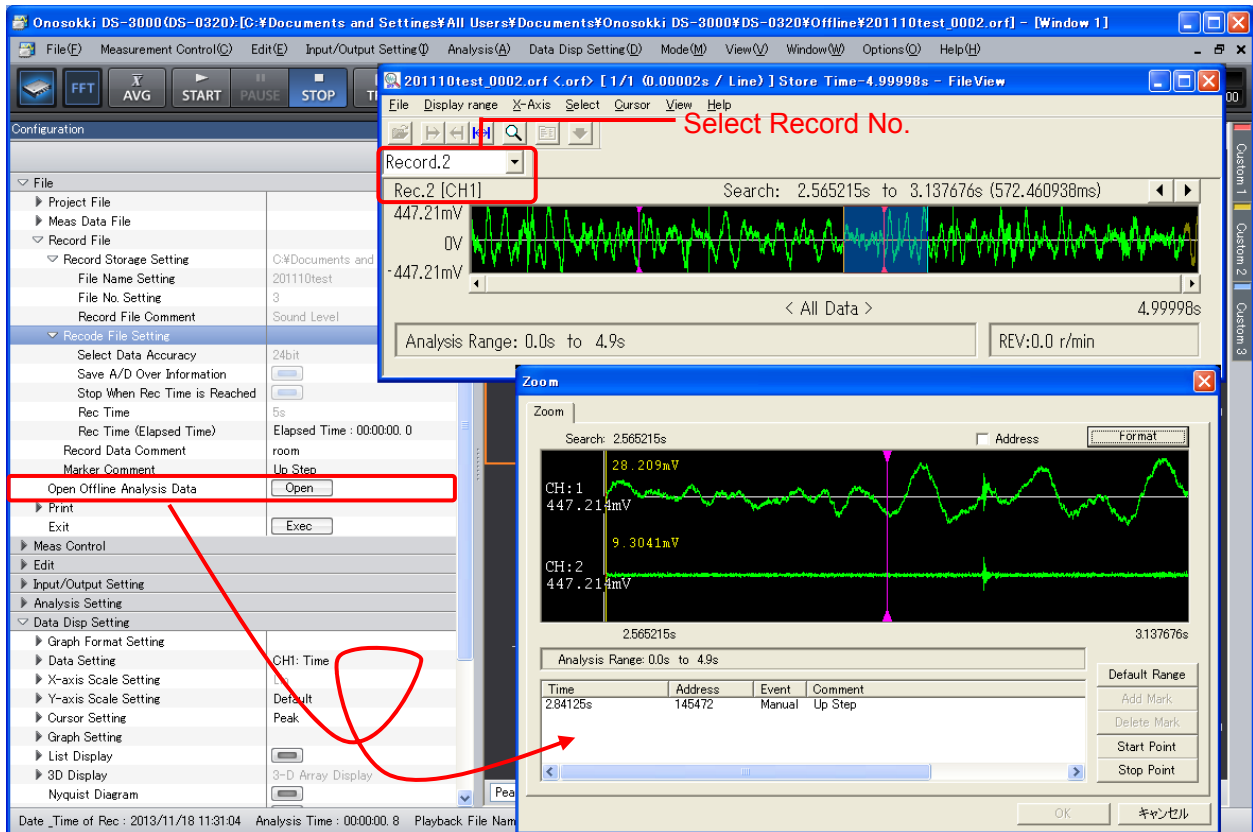
- ⑤ Further recording may be repeated in the same manner.
- ⑥ When the "REC" button on the main tool bar is turned off, the red indicator on the button will turn off, and the data recorded by that time will be saved in the file "201110test_001.orf" as "RECORD1", "RECORD2", and so on.
- ⑦ Then, clicking the "REC" button again to turn it on will create a file named "201110test_002" to record the data. This is because the file number has been automatically incremented from 1 to 2 according to the "File No. Setting". Note that the data can be saved in a new file name by changing the "File Name Setting".



- ⑧ To stop the recording in progress, click the "STOP" button on the main tool bar.

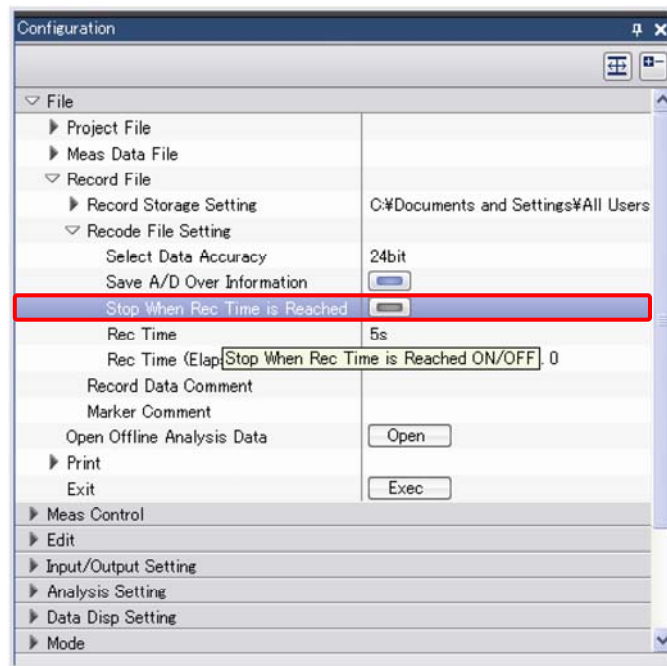
-6 Offline Analysis

The following figure shows the case of offline analysis, when the file view is opened. The vertical marker line is displayed in purple. Here, you can specify a record number to analyze the data.



[Supplementary Information]

1. If it is desired to use the "START" and "STOP" buttons on the main tool bar to record data, turn off the "Stop When Rec Time is Reached" button after clicking "File" > "Record File" > "Record File Setting" in the "Configuration" window.



2. If the "AVG" button on the main tool bar is selected, the recording will be automatically stopped and the recording for "Record No 1" will be completed when the specified averaging count is reached.

- For the details of offline operation, refer to "Operation manual for Offline Tracking Analysis".

End