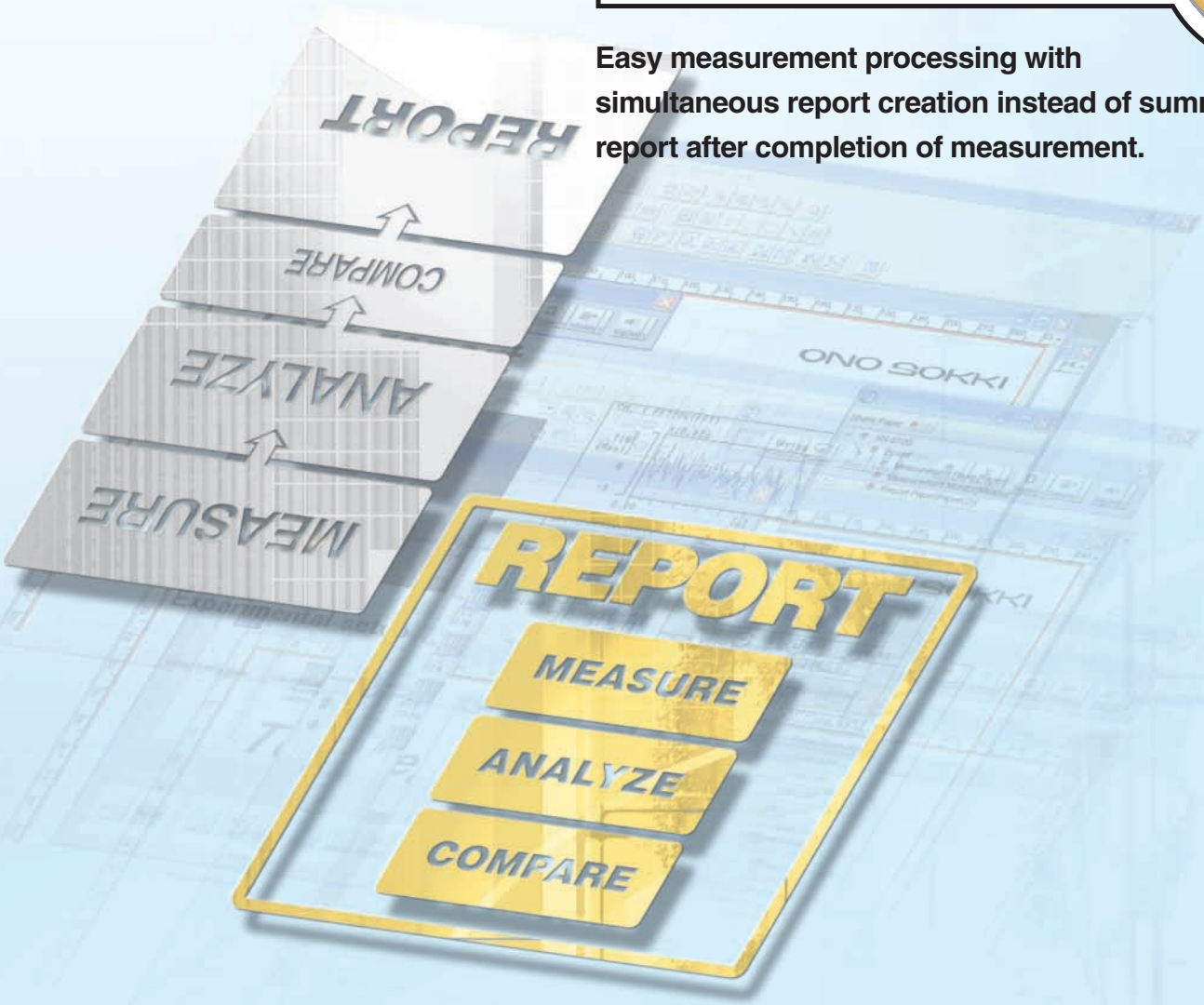
Report Creation Software
with
Simultaneous Measurement Function

XN-8000 series

A Packaged Software of Measurement, Analysis and Report Creation Is Coming

Easy measurement processing with simultaneous report creation instead of summarizing the report after completion of measurement.

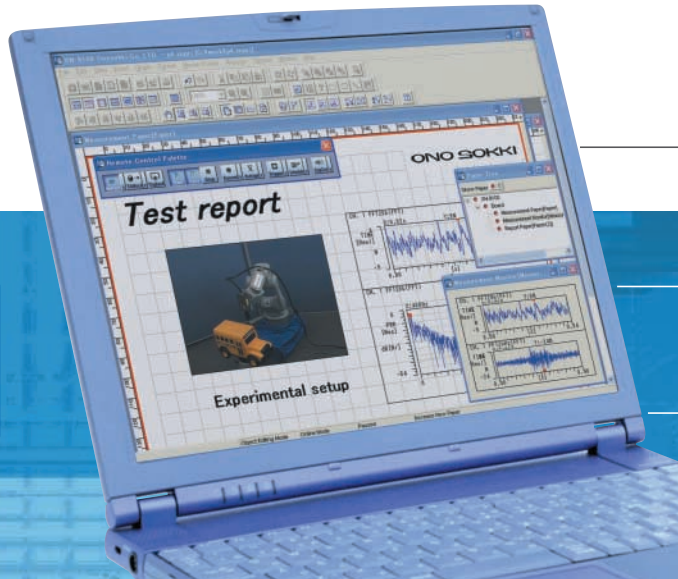


ONO SOKKI

XN-8000 series

Integrates Report Creation with Measurement Processing

**Conventionally, acoustic and sound measurement results have been summarized as a report after completion of measurement, analysis, comparison, and other processes.
However, these working processes were complex and time-consuming as well as requiring significant skills of the person in charge.
"XN-8000 series" is designed as platform software, using a new concept that is completely different from conventional practices.
Simply performing the report creation procedure allows measurement and other processing series to be done in real time, while simultaneously confirming the completion image.
XN-8000 series shortens working time remarkably, and supports the standardization of working procedures, thus contributing to improvements in workflow and productivity.**



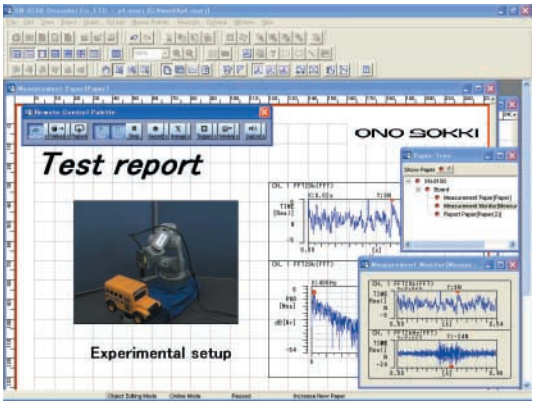
Applicable Measurement Unit

DS-2000 Series Multi-channel
Data Station

Easy

Integration of Measurement and Report Creation

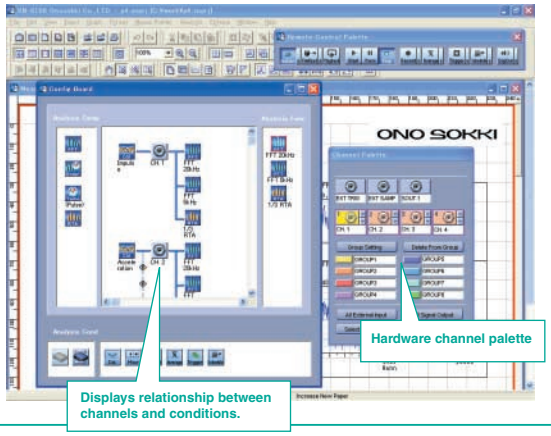
XN-8000 series integrates conventional working processes, ranging from measurement with dedicated instruments to secondary data processing and report creation, into a single platform. XN-8000 series starts measurement in the report creation screen and then displays measurement results in real time as a completion image. During repetitive measurement, for example, it saves the trouble of creating reports one by one, significantly reducing working time.



Clear

Graphical Display of Relationship between Measurement Conditions

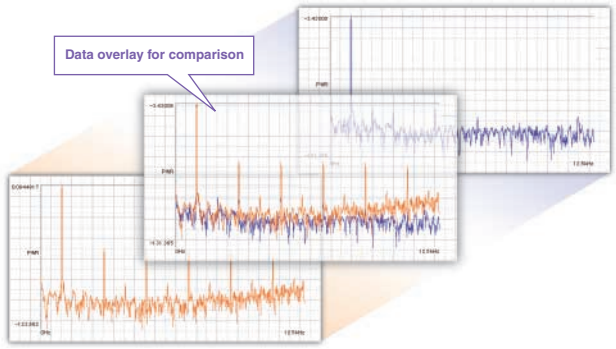
For sensor calibration, hardware setting, analysis function, etc., XN-8000 series displays various functions as icons in related manner. Measurement conditions become clear by visual check, and multiple items can be set and changed speedily. XN-8000 series saves the time of looking for target condition settings and items from many property settings.



Various

Intuitive Overlay and Comparison Operations of Measured Waveforms

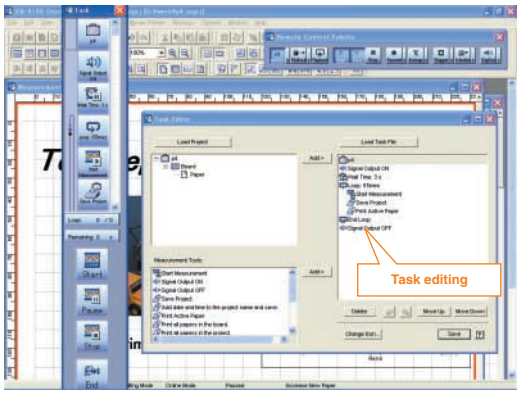
In the past, graphs printed on sheets were overlapped or graphs were displayed on a personal computer in overlay mode in order to compare and analyze measurement waveforms. XN-8000 series makes it possible to overlay graphs with a suitable measurement scale simply by dragging a graph object onto another one.



Convenient

Semi- or Full-Automatic Measurement for Routine Procedures

XN-8000 series offers the task function to perform repetitive measurement efficiently when, for example, the working procedure is predetermined. The function makes it possible to perform semi- or full-automatic measurement easily and intuitively only by registering measurement conditions and report screens in advance and by arranging icons using the mouse according to the working procedure.



*Model XN-0860 Task editing function software is required in order to perform semi or full-automatic measurement by creating and correcting measurement procedure (task). This software is not required if it is only executed a created task.

●Incorporates measurement, analysis, comparison, and other processes in "Report Creation", remarkably increasing working efficiency and reducing working time.

●Reflects measurement data to graphs and charts in a report in real time, allowing measurement and output while confirming the completion image of the report.

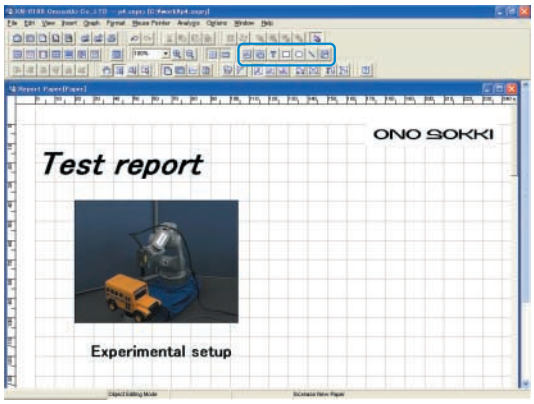
●No specialist skills are required for report creation and measurement work. Promotes standardization of tasks and improvements in workflow.

A New Tool of Measurement Report

Requiring No Specialist Skills for Report Creation and Measurement Work

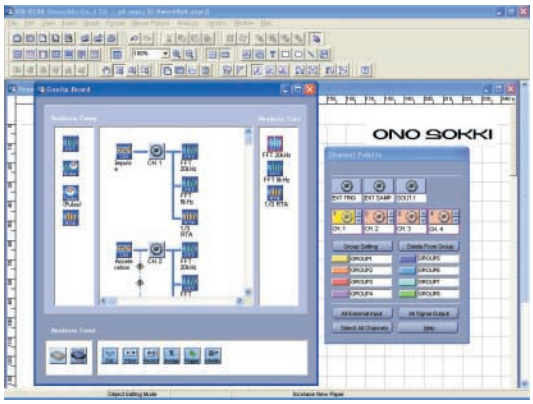
Model XN-8100 is a platform of XN-8000 series with a new concept that works completely differently from conventional practices of acoustic and vibration measurement. It controls all work processes from the completion image at report creation, and supports work procedure development by means of a task function.

1 Report Layout Creation through Object Arrangement



Creation of report layout is easy. Target objects (graphs, texts, images, etc.) can be put on the report page simply by clicking icons in the tool bar and then specifying the desired layout size by dragging the mouse. Layout settings can be changed at any time.

2 Measurement Setup Procedure with Configuration Board



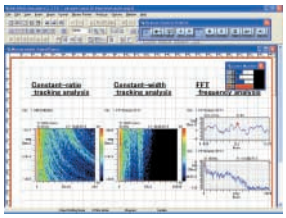
Using the Configuration Board and Channel Pallet, arduous calibration, measurement, and analysis setting can be performed in graphical form. The channel selected with the Channel Pallet and the analysis function assigned to the channel are displayed in tree form. Multi-application and multi-frequency range setting can be made while confirming the tree-form display.

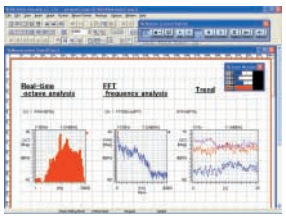
■ Applicable to Diverse Data Analysis

●Multi-application (simultaneous multiple analyses and recordings)

●Multi-frequency range

- FFT frequency analysis
- Frequency response analysis
- Real-time octave analysis
- Constant-width tracking analysis
- Constant-ratio tracking analysis
- Octave tracking analysis
- Phase tracking analysis





■ Sharing of Report

If recorded data files (ORF format) are specified for the project file, waveforms can be played back in motion.
The model XN-8100's viewer (free of charge) makes it possible to view created project files and read cursor values.

* Please note, however, that analysis condition change, hardware connection, print function, and file storage are not possible.

■ Multi-Frequency Range Setting

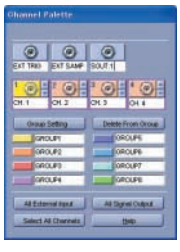
The multi-frequency range function allows multiple frequency ranges to be set for the input signal of each channel, enabling simultaneous real-time analysis.

■ Smooth Measurement and Analysis Setting

A wide range of condition settings are provided to perform averaging, trigger setting, scheduling, and other measurement and analysis functions.

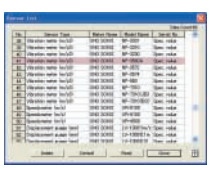
■ Automatic Display of Connected Channels

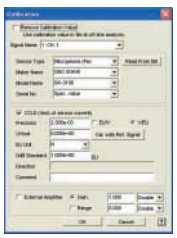
The Channel Pallet, a part of the Configuration Board functions, makes it easier to manage connected instruments.



■ Labor-saving of Recalibration Work

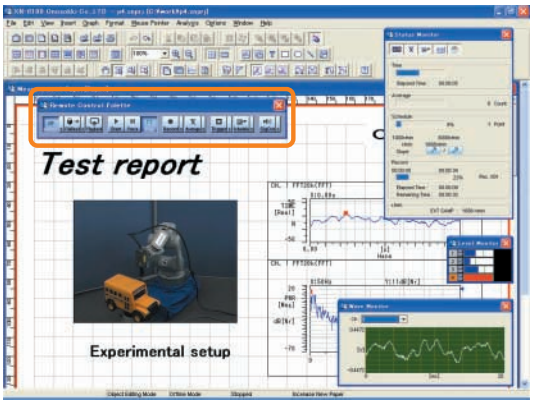
Arduous calibration work has become a simple selection step. This operation remains easy even when using a calibrator.

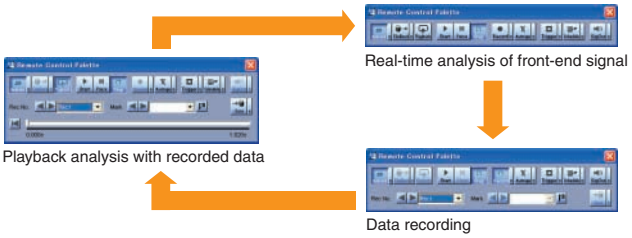




For details on the Configuration Board, see pages 6 and 7. ►►

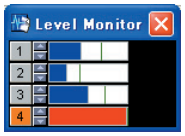
3 Measurement Started from Remote-Controlled Pallet





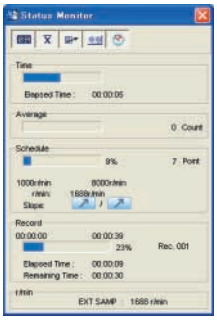
■ Level Monitor

Displays the input level of the signal-input channel in the form of bar graph. Peak level display, input-over display, and voltage range change are possible.
The input-over information is retained.



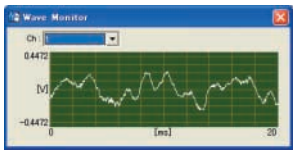
■ Status Monitor

Displays the time status (elapsed time and remaining time of analysis), averaging status (number of averagings per analysis), scheduling status (number of points, revolution speed, slope), recording status (elapsed time and remaining time of recording, record number), and revolution speed.

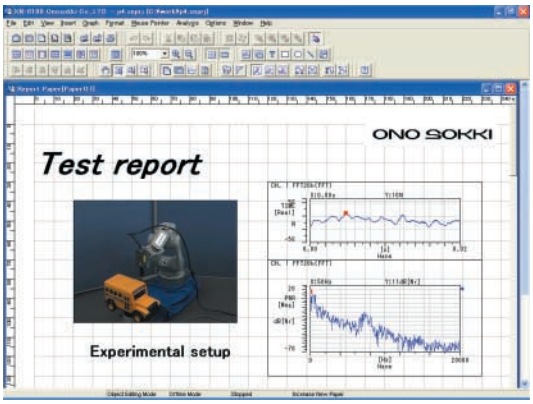


■ Waveform Monitor

Constantly monitors the input signal based on the maximum analysis frequency range (sampling frequency). Useful for input A/D-over monitoring. Also allows trigger setting while monitoring instantaneous waveform.



4 Report Completed upon Completion of Measurement



■ Report Completed upon Completion of Measurement

Model XN-8100 completes a report upon completion of measurement. The report can be printed in original form.

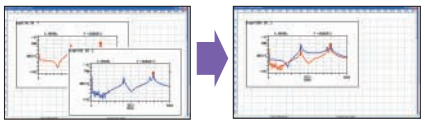
■ Arbitrary Offline Analysis with Project File

Analysis types and conditions can be changed and diverse offline analyses can be realized simply by opening a project file and specifying recorded data using the Remote-Controlled Pallet.

■ Comparison of Measurement Results

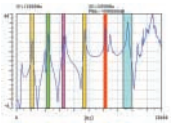
Intuitive Overlay and Comparison Operations of Measured Waveforms

Overlaid display with unified measurement scale is possible simply by dragging one graph signal onto another one. In addition to overlaying measured data and past data, measured data can be overlaid to image data, even if only hardcopy is available.



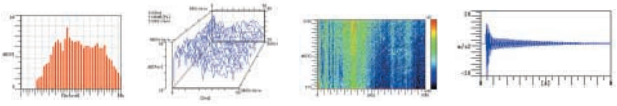
■ Multi-Marker

Multiple markers can be registered as search point markers. The multi-marker function is also applicable to delta search.



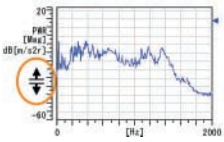
■ Support for Diverse Graph Types

Sequential line graph, bar graph, step graph, half bar graph, line graph, array (sequential line graph), array (bar graph), array (step graph), contour map, and color map are supported.



■ Axis Setting with Cursor Mode

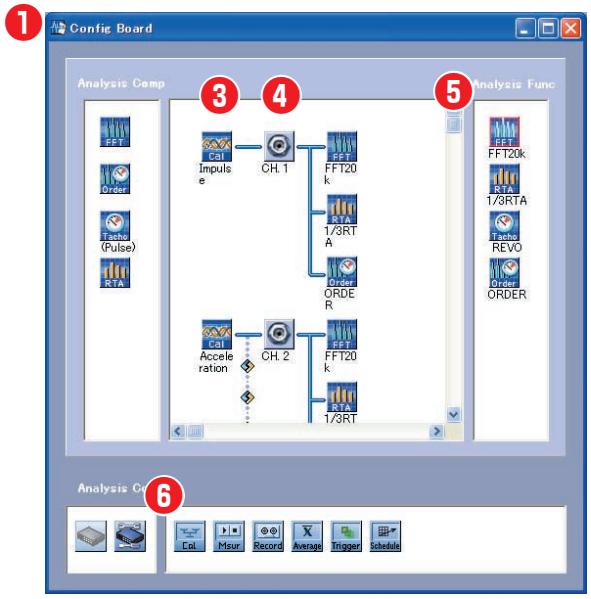
Graph upper and lower limit settings, and parallel displacement of axis, can be modified with mouse drag operation.

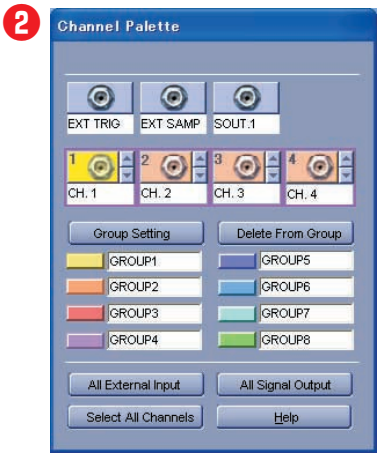


Configuration Board

Graphic Dialogs and a New Format of Measurement Report

The Configuration Board displays analysis conditions (averaging, trigger setting, scheduling, etc.) and analysis functions (FFT, tracking, octave, etc.) as icons, and visualizes their association in tree form.
It not only clarifies the relationship between the channel and measurement conditions through visual confirmation, but also allows speedy setup and change of multiple items, eliminating the need to search for setup properties each time.
A single channel or multiple ones (group) can be selected from the Channel Pallet and then analysis conditions and analysis functions can be assigned to each channel. This realizes easily multi-application and multi-frequency range for performing different types of analysis simultaneously.





1 Configuration Board

All functions required for analysis (calibration, hardware settings, analysis functions, and analysis conditions) can be set with the graphical user interface.

■ Analysis Configuration Display in Tree Form

Available analysis functions are displayed. XN-8000 series uses the measurement platform (XN-8100) in combination with optional analysis functions. Available optional analysis functions include the FFT analysis function (XN-0821), order ratio analysis function (XN-0822), octave analysis function (XN-0823), etc. The record function is included in each analysis function, allowing data recording simultaneously with various analyses.

■ Setting with Mouse Drag Operation

Set analysis functions are displayed in list form. An analysis function is connected to a channel by dragging the icon of the analysis function onto the target channel in the connection area. Multiple analysis functions can be assigned to a single channel. In addition, the same single analysis function can be connected to multiple channels. Analysis functions are set in a setup screen that is displayed by clicking the icon in the connection area or registration list.

■ Simultaneously possible Multi-Application and Recording

Constant-ratio tracking analysis and constant-width tracking analysis, for example, can be processed simultaneously in real time. In addition, various analysis functions and RECORDing can be executed simultaneously.

■ Multi-Frequency Range

Multiple frequency ranges can be set for the input signal of each channel, allowing simultaneous real-time analysis. It is possible to realize such analysis that uses multiple FFT analyzers using only one signal. This function broadens the frequency range for total analysis while at the same time setting a frequency range that suits the target frequency, enabling simultaneous real-time analysis.

2 Channel Pallet

The Channel Pallet displays the connected front-end channels. It allows input signal selection on a channel basis as well as grouping of multiple channels for selection on a group basis. The Channel Pallet, a part of Configuration Board functions, is used together with the Configuration Board.

■ Group Setting

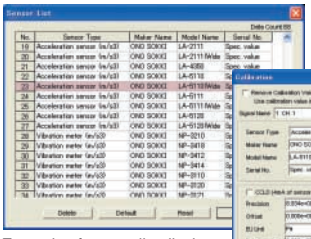
Grouping is possible, based on sensor and analysis types. Channels can be selected collectively by pressing a set group color button.

■ DS-2000 Unit Information Display as Icon

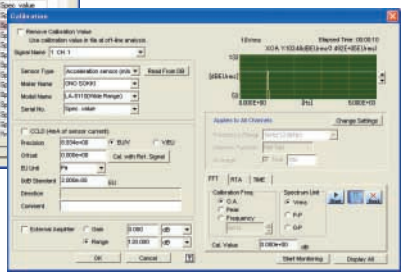
The voltage range can also be changed with the Channel Pallet. At input signal over, a warning is displayed (as shown at right). The channel name can be changed freely, for example, from "CH.1" to "Impulse hammer."

3 Sensor Database

Calibration is completed simply by selecting the sensor type, manufacturer name, model name, and serial number sequentially. These data can be loaded from the sensor database (sensor list) by selecting the sensor to be used. This database makes it possible to accumulate the information of the sensor to be used, saving labor for recalibration at the time of sensor replacement. Sensors not included in the database and sensors calibrated with the reference signal can additionally be registered to the database.



Example of sensor list display



Example of calibration with reference signal

■ External Amplifier

Saves labor in recalibration performed by changing the range of the sound level meter and the gain of the external amplifier.

■ 0-dB Reference

EU is effective even during time-axis display and linear display.

4 Digital Filters

Digital filters can be set for each channel. Available filters include low-pass filter, high-pass filter, band-pass filter, and band-reject filter. The cut-off frequency can be set in 1-Hz units.

5 Analysis Functions

Ⓐ Settings List

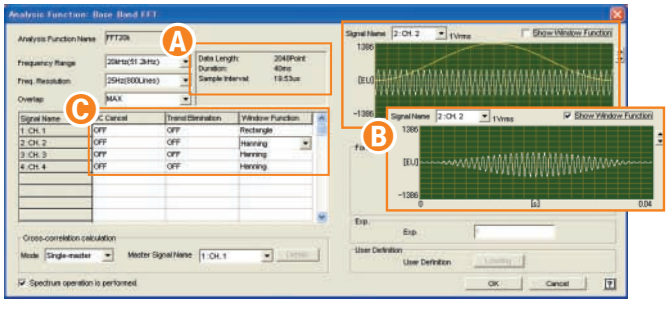
The data length, time length, and sampling interval can be confirmed.

Ⓑ Window Function Display

When setting the FFT and order ratio analysis functions, the monitor waveform can be displayed with weighting of the window function.

Ⓒ Collective and Individual Settings

The window function can be set either collectively for multiple channels or individually for each channel.



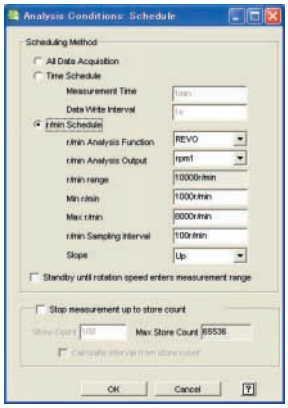
Example of base band FFT setting

6 Analysis Functions

■ **Averaging** ····· Simultaneous measurement of Ave, Max, and Min is possible with spectrum summation averaging,. Display changeover can be made after measurement.

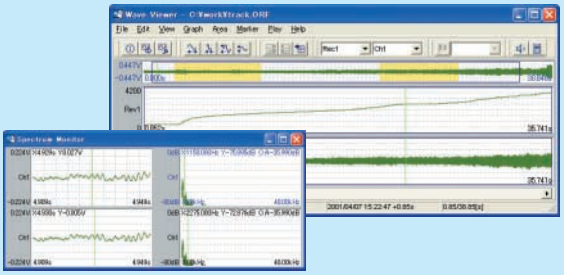
■ **Trigger Setting** ··· Voltage-based trigger setting is possible. Even if the voltage range is changed, trigger can be applied with specified conditions. The new Hold-off function broadens the range of trigger settings.

■ **Scheduling** ····· With revolution scheduling, up to 65,535 store points can be used. Applicable slope settings include Up, Down, Up-Down, and Down-Up. The function to wait until the revolution speed becomes out of range has been added, allowing measurement to be started irrespectively of the revolution speed status.



Offline Analysis with XN-0850

The XN-0850 record data editing function makes it possible to perform offline analysis and playback analysis for specified analysis range while monitoring the recorded data (ORF/WAV format).



■ Spectrum Monitor

Displays the spectrum of the I frame at the cursor position in the waveform viewer. Effective for analysis function setting.

■ Viewer Function

The analysis range can be set and zoomed with simple mouse drag function, allowing efficient analysis range setting.

■ Analysis with Sound Generation

Offline analysis and playback analysis can be performed while playing back and listening to the recorded data (ORF/WAV format). Useful for making it easier to grasp phenomena.

■ Range List Function

Multiple analysis ranges can be registered, making repetitive analysis and data comparison easier. Data within specified analysis range can also be exported.

■ Time-Axis Statistical Processing

Time-axis statistical processing of specified analysis range is possible, exceeding the conventional 1-frame restriction.

XN-8000 series

Model	Product Name	Overview
XN-8100	**Measurement platform (report function)**	Main body of XN-8000 series. When analysis functions such as XN-0821 are added to the XN-8100, this enables hardware and analysis condition setting, multi-application and multi-frequency range analysis, etc.
XN-0820	**Tachometer function**	Converts pulse signal into revolution. Used together with the XN-0821,XN-0822 and XN-0823.
XN-0821	**FFT analysis function**	FFT analysis zooming the signal are enabled in combination with XN-8100. Real-time analysis in multi-frequency range is enabled by setting the frequency range and other multiple analysis conditions. Constant-width tracking is enabled in combination with the XN-0820.
XN-0822	**Order ratio analysis function**	Rpm order ratio analysis (constant-ratio tracking) is enabled in combination with the XN-8100 and XN-0820.
XN-0823	**Octave analysis function**	1/1 or 1-/3 octave band analysis is enabled in combination with the XN-8100. Octave tracking is also enabled by adding the XN-0820.
XN-0850	**Data recording and editing functions**	Used to edit measurement data to perform repetitive analysis (off-line analysis) efficiently. Enables spectrum monitoring, time-axis statistical processing, sound board output, file export to WAV format, etc. as well as total display and analysis range specification of recorded data in combination with the XN-8100.
XN-0860	**Task editing function**	Semi- or full-automatic measurement is enabled by creating and correcting measurement procedures (tasks). The XN-0860 is not required to execute a created task.
XN-0870	**Data file replaying function**	Data file (ORF/WAV format) can be output (replayed) from sound card by synchronizing the start of the analysis at XN-8100. WAVE format of randam/sain waveform can be created.
—	**XN-8000 series viewer**	Allows you to view a project file created by XN-8000 series and read the cursor value. If recorded data files (ORF format) are specified for the project file, waveforms can be played back allowing the use as a moving report. However, analysis condition setting, hardware connection, printing, and file saving cannot be performed.

XN-8000 series Combinations

	XN-8100	XN-0820	XN-0821	XN-0822	XN-0823	XN-0850
FFT analysis with XN-8000 series	○	—	○	—	—	—
FFT and tracking analysis with XN-8000 series	○	○	○	○	—	○
FFT and octave analysis with XN-8000 series	○	—	○	—	○	○

Applicable Measurement Unit

Model	Product Name	Overview
DS-2000 Series	**Multi-channel Data Station**	Signal processing unit for sound and vibration measurement. When used together with the 2- or 4-channel unit, the number of channels can be extended to 32.

Recommended operating environment (including DS-2000)

OS	Windows® XP, Windows® 2000
Connection with DS-2000	Desktop PC: PCI BUS, Notebook PC: PC card (CardBus) *Refer to the catalog of the DS-2000 Series Data Station for details.
CPU	Pentium® 4 3GHz or higher (or compatibles)
Display	1024×768(XGA) or higher
Memory	512MB or more
Hard disk	500MB or more

*Windows® is a registered trademark of Microsoft Corporation of the U.S.A. and other countries. Other company names and product names are trademarks or registered trademarks of each individual company.

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