RION CO., LTD.

RIONOTE 1/3 Octave Band Analysis Program

SX-A1RT

Instruction Manual



Manuals Provided with This Program

The following manuals are provided with this program.

SX-A1RT Instruction Manual (This Manual)
Describes how to operate and configure the 1/3 Octave Band Analysis Program "SX-A1RT".

HTML for Instruction Manual Application
The HTML help that describes settings for SX-A1RT.

Overview of This Manual

This manual mainly describes the functions and operations of SX-A1RT. When the measuring system is used with another device, be sure to read the manual of the program for the operation.

SX-A1RT Overview
Describes the overview of this program.

Screen Layout
Describes the layout of the screen displayed.

Starting/Exiting the SX-A1RT
Describes how to start and exit this program.

Measuring Wave
Describes the measurement related operations using this program such as how to start and stop measurement.

Marker
Describes the marker.

Operating the Project
Describes the project related operations such as how to open and delete a project.

Operating Recall Screens
Describes the operations on the Recall screen such as how to perform re-calculation and output files

Operating Graphs
Describes the graph operations on the Measurement or Recall screen.

Settings
Describes how to configure the setting items on the Measurement settings screen or Recall settings screen.

Specifications

Provides the specifications of this program.

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SX-A1RT Overview

The SX-A1RT is an octave band analysis program that runs on the RIONOTE.
You can write recorded wave data on a SD memory card connected to the RIONOTE and perform an octave band and 1/3 octave band analyses.

Screen Layout

Measurement Screen Layout



MEMO	- The screen above is an example of the display with four graphs.

Status Bar

Displays the registered amplifier status, date and time, and battery status.

Operation Area

Provides measurement related buttons and information such as measurement start/stop button and measurement time display.

Time-Level Display Area

Displays a Time-Level graph of wave data currently being input. By changing the channel, you can change the data to display.

Bar Graph Display Area

Displays the level value of input wave data for each frequency band on a bar graph. The number of graphs to display can be selected from one, two and four. You can also check the abnormal state during recording, such as OVERLOAD.

Recall Screen Layout



Status Bar

Displays the selected project name, date and time, and battery status.

Operation Area

Provides the buttons to re-calculate and output recall data.

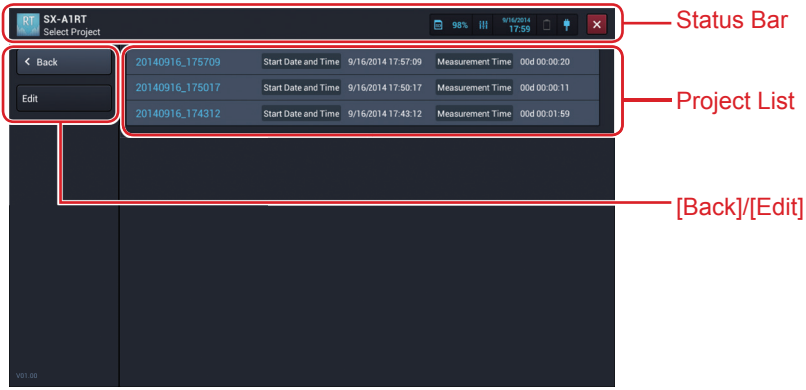
Time-Level Display Area

Displays a Time-Level graph of wave data currently opened. By changing the channel, you can change the data to display.

Level Graph Display Area

Displays the level value of currently opened wave data for each frequency band on a bar graph. The number of graphs to display can be selected from one, two and four.

Project Select Screen Layout



Status Bar

Displays the date and time and the battery status.

[Back]

Tap the button to return to the previous screen.

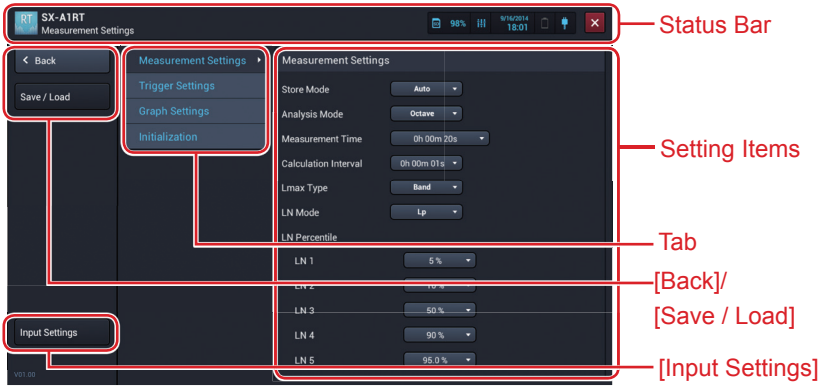
[Edit]

Tap the button to display the screen to change a project name or delete a project.

Project List

Displays the list of saved projects.

Configuration Screen Layout



Status Bar

Displays the date and time and the battery status.

[Back]

Tap the button to return to the previous screen.

[Save / Load]

Tap the button to display the screen to save the settings. This button appears when you move from the Measurement screen to the Setting screen.

[Input Settings]

Tap this to display the Input settings screen. This button appears when you move from the Measurement screen to the Setting screen.

Tab

Displays the setting items for each purpose.

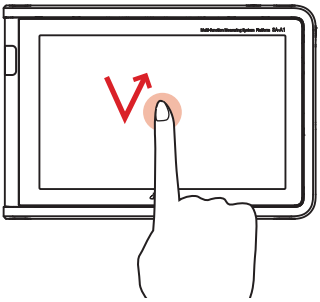
Setting Items

Displays the setting items of the selected tab.

Basic Operation

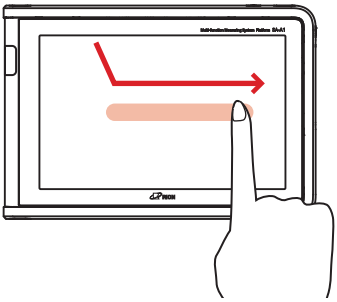
Important	- The touch panel is designed to be gently touched by fingers or stylus pen. Do not press the panel hard with fingers or touch it with a sharp object (such as ballpoint pen/pin). - Please note that the touch panel may not work correctly or cause malfunction on the following conditions. - Operation with a glove - Operation with a nail tip - Operation while putting foreign objects on the touch panel - Operation with a protective film or label attached on the touch panel - Operation with a water droplet or condensation on the touch panel - Operation with wet or sweaty fingers

Tap/Double-Tap



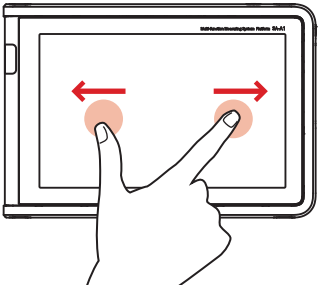
Tap is to lightly touch the screen with a finger and immediately release the finger. Tap is used to select an item or icon displayed on the screen.
Double-tap is to tap twice quickly.

Slide



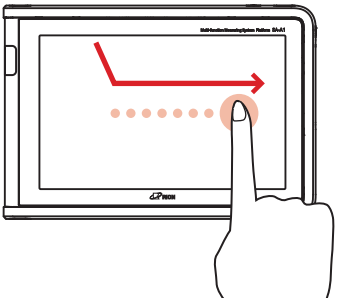
When all of data cannot be displayed on the screen, you can move the finger to the desired direction while lightly touching the screen. Slide is used to scroll the screen or switch pages. It is also used to move a gauge or bar to adjust the volume and brightness.

Pinch



You can open two fingers (pinch out) or close (pinch in) while touching the screen. It can be used to zoom in or out of a graph.

Drag

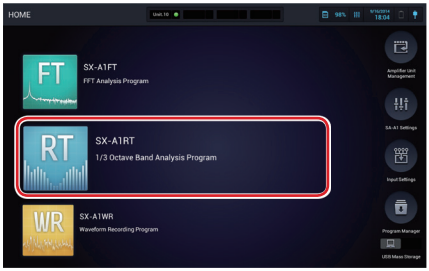


You can drag an item or icon to move to the desired location while lightly touching the screen.

Starting/Exiting the SX-A1RT

Starting the SX-A1RT

1. **Tap [SX-A1RT] on the HOME screen.**



The SX-A1RT starts and the Measurement screen appears.

MEMO	- You may not see [SX-A1RT] displayed on the screen if multiple programs are installed. In this case, slide the programs up or down on the HOME screen to display [SX-A1RT].

Exiting the SX-A1RT

1. **Tap [X] on the right side of the status bar.**



2. **Tap [OK].**



MEMO	- You cannot exit the SX-A1RT during measurement.

Measuring Wave

Starting Measurement

1. **Slide [Start] down.**



Measurement is started, and the instantaneous value data and calculation data are saved on a SD memory card at the same time.

Important - Do not power off or pull out the SD memory card during measurement.

MEMO

- Depending on the Trigger Mode you selected, the operation after starting measurement becomes as follows.
  - Free: Starts measurement immediately. Measurement stops after the specified measurement time.
  - Single: Puts in a trigger standby state. Measurement starts when trigger conditions are met. Measurement stops after the specified measurement time.
  - Repeat: Puts in a trigger standby state. Measurement starts when trigger conditions are met. Measurement stops and the trigger standby state returns after a specified measurement time.
- When you start measurement, [Start] changes to [Stop].
- The screen displays [MEASUREMENT] during measurement, and [STAND-BY] during a trigger standby period.
- You can change the graph size, channel to display or type of calculation value during measurement. (The level range cannot be changed.)
- Measurement stops automatically when the available SD memory card space becomes small or the battery level becomes low.

Stopping Measurement

1. Slide [Stop] down.



MEMO	- Use this operation to stop measurement manually before the specified measurement time ends. - When you stop measurement, [Stop] changes to [Start] and the screen displays [MONITORING].

Pausing Measurement (Store Mode: [Manual])

1. Tap [Pause] during measurement.



Measurement stops temporarily and the graph update stops. "PAUSE" is displayed during a pause period.

MEMO	- Tapping [Pause] while measurement is stopped (monitored) also causes "PAUSE" to be displayed and the graph update to stop.

2. Tap [Pause] again.

Measurement resumes.

Configuring the Measurement Time

Configure time to measure. You can configure measurement time between 1 second and 1000 hours.

1. **Tap [Meas. Time].**

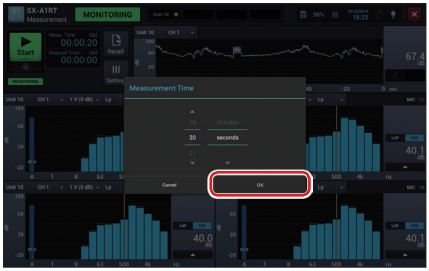


2. Slide the measurement time to configure.



MEMO	- Select the unit from [Second], [Minute], or [Hour] and slide the measurement time to configure. [Second]: Configure between 01 and 59. [Minute]: Configure between 01 and 59. [Hour]: Configure between 0 01 and 10 00. - If you select [Hour], 24 hours are converted into 1 day and the measurement time displays it as "01d" and fractions as hours. <Example> If you set to 100 hours, the measurement time displays as "04d" and fractions as 4 hours. - The measurement time can be configured on the Measurement settings screen as well.

3. Tap [OK].



Marker

Inserting the Marker during Measurement (Store Mode: [Auto])

Marker is a function to mark measured wave data. It is used to mark when you add notes during measurement.

1. **Slide Marker icon to the right during measurement.**



The marker is inserted in the measured data.

2. **To end the insert, slide Marker icon to the left.**



The insert of the marker is ended.

Inserting the Marker to Measured Wave Data

The marker can be inserted in the recall data in a project as well.
(The data obtained while the store mode is [Manual] is excluded.)

1. **Open a project and display the Recall screen. (P.31)**

2. **Tap [Marker].**



3. **Slide the marker to the position to which you want to insert the marker.**



4. To change the marker starting point, tap the starting line of the marker.



The color of the marker starting line changes, enabling the move of the line.

5. Slide the starting line to the desired position.



MEMO	- You cannot move the starting line after the ending line. If you move it after the ending line, the ending line moves too.

6. **To change the marker ending point, tap the ending line of the marker.**



The color of the marker ending line changes, enabling the move of the line.

7. **Slide the ending line to the desired point.**



MEMO	- You cannot move the ending line before the starting line. If you move it before the starting line, the starting line moves too.

8. **When you decide the marker position, tap [ENTER] below the marker.**



The marker is inserted in the selected area.

9. **Tap [Marker].**



Deleting the Marker

1. **Open a project and display the Recall screen. (P.31)**

2. **Tap [Marker].**



3. **Tap [Delete] below the marker to delete.**

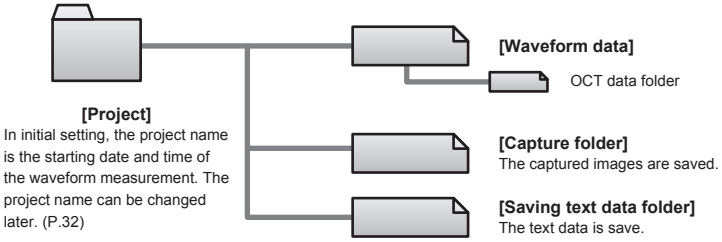


MEMO	- You can delete an inserted marker during measurement.

Operating the Project

Project

Project is a folder to save data such as a measured record. All data regarding measured records are saved in the same project.
The project name is saved as the starting date and time of recording measurement but can be changed to any name later.



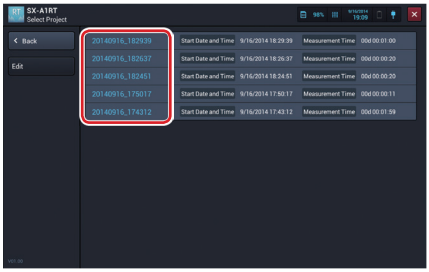
MEMO	- To use the project, which was transferred from a SD memory card to a computer, again on this unit, save the program on a SD memory card without creating a folder.

Opening the Project

1. **Tap [Recall] on the Measurement screen.**



2. **Tap the name of the project you want to open.**

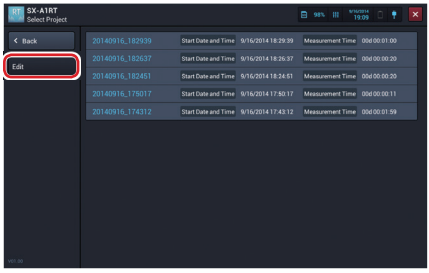


The Recall screen appears and displays wave data of the selected project .

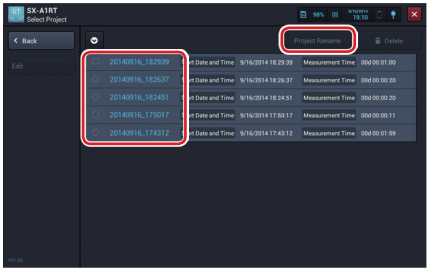
Changing the Project Name

1. **Tap [Recall] on the Measurement screen.**

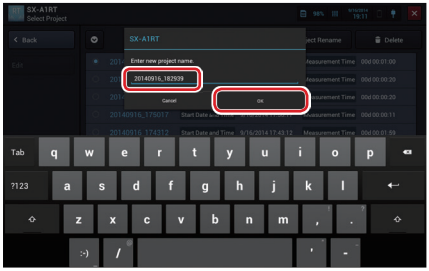
2. **Tap [Edit].**



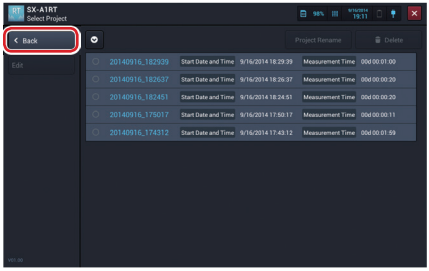
3. **Tap the project of which you want to edit the name and tap [Project Rename].**



4. **Enter the name and tap [OK].**



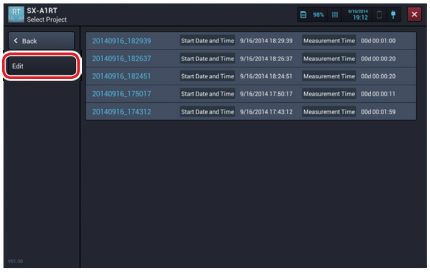
5. **Tap [Back].**



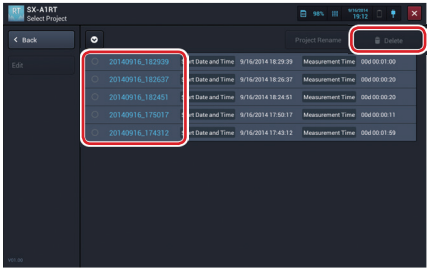
Deleting the Project

1. **Tap [Recall] on the Measurement screen.**

2. **Tap [Edit].**

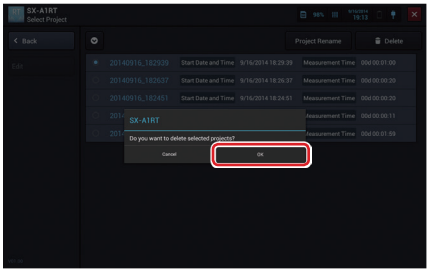


3. **Tap the project to delete and tap [Delete].**



MEMO	- You can select multiple projects. - When the project is selected, [●] appears to the left of the project. - Tap the selected project again to cancel the selection. - Tap [ ] to select all projects.

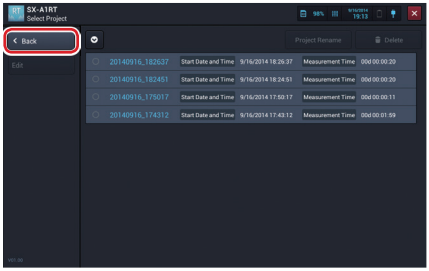
4. Tap [OK].



Important

- If you delete the project, you cannot restore data. Check if data is unnecessary before deleting.

5. Tap [Back].



Operating Recall Screen

Selecting the Calculation Range and Re-calculate

Before re-calculating wave data, specify the calculation range including the target data.

1. **Tap [Calc. Range].**



2. **To move the calculation range, slide the selected range to the left or right while tapping.**



3. **To change the calculation starting time, tap the starting line of the calculation range.**



The color of the starting line changes, enabling the move of the line.

4. **Slide the starting line to the desired time.**



MEMO	- You cannot move the starting line after the ending line. If you move it after the ending line, the ending line moves too.

5. **To change the calculation ending time, tap the ending line of the calculation range.**



The color of the ending line changes, enabling the move of the line.

6. **Slide the ending line to the desired time.**



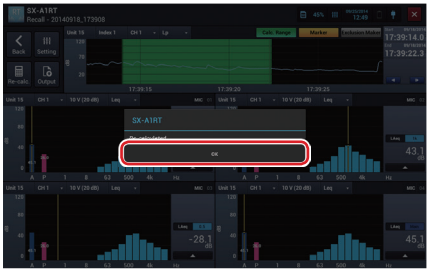
MEMO	- You cannot move the ending line before the starting line. If you move it before the starting line, the starting line moves too.

7. Tap [Re-calc.].



The selected range is re-calculated and a message is displayed when calculation is finished.

8. Tap [OK].



Entering the Exclusion Marker

Exclusion Marker allows you to specify the range to exclude from calculation when re-calculating.

1. **Tap [Exclusion Marker].**



2. **To move the Exclusion Marker, slide the selected range to the left or right while tapping.**



3. **To change the Exclusion Marker starting time, long-touch the starting line of the Exclusion Marker.**



The color of the starting line changes, enabling the move of the line.

4. **Slide the starting line to the desired time.**



MEMO	- You cannot move the starting line after the ending line. If you move it after the ending line, the ending line moves too.

5. **To change the Exclusion Marker ending time, tap the ending line of the Exclusion Marker.**



The color of the ending line changes, enabling the move of the line.

6. **Slide the ending line to the desired time.**



MEMO	- You cannot move the ending line before the starting line. If you move it before the starting line, the starting line moves too.

7. After selecting the Exclusion Marker, tap [ENTER].



The color of the selected range changes and the Exclusion Marker appears.

MEMO	- You can move the selected Exclusion Marker or change its range. - If you specify another Exclusion Marker to overlap the existing Exclusion Marker, they will be combined into one Exclusion Marker.

Outputting Re-calculation Data

You can output re-calculated data to a binary file.

1. Execute re-calculation.

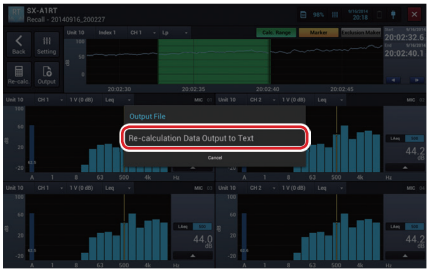


MEMO	- For details on how to re-calculate, see "Selecting the Calculation Range and Re-calculate" (P.36).

2. Tap [Output].

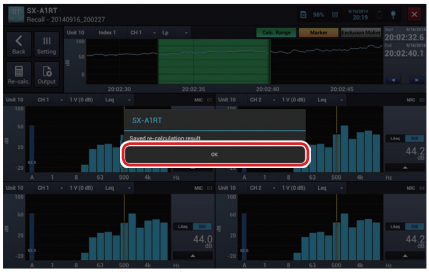


3. Tap [Re-calculation Data Output to Text].



Output re-calculation data to a binary file.

4. Tap [OK].



MEMO	- The output binary file is saved in the project folder. - The output binary file can be converted into a text file using SA-A1 file converter.

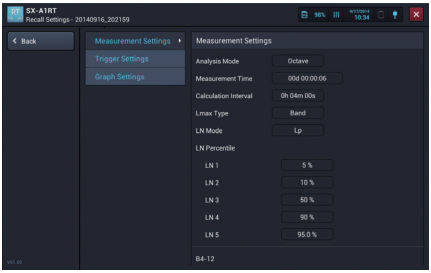
Checking the Recall Data Settings

1. **Open a project and display the Recall screen. (P.31)**

2. **Tap [Setting].**



The measurement settings of recall data are displayed.



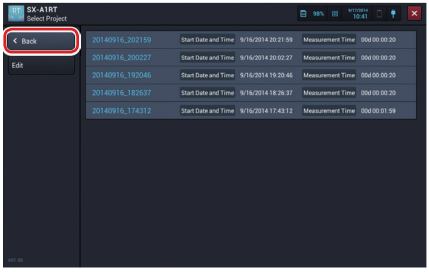
Closing the Recall Screen

1. **Tap [Back] on the Recall screen.**



The Select project screen is displayed.

2. **Tap [Back].**



The Measurement screen is displayed.

Operating Graphs

Zooming in on the Graph View

1. **Pinch out on the graph on which you want to zoom in.**



MEMO	- The zoomed in graph is returned to previous display by double-tapping a graph.

Zooming out of the Graph View

1. **Pinch in on the graph of which you want to zoom out.**



MEMO	- The zoomed out graph is returned to previous display by double-tapping a graph.

Using the Single Graph View

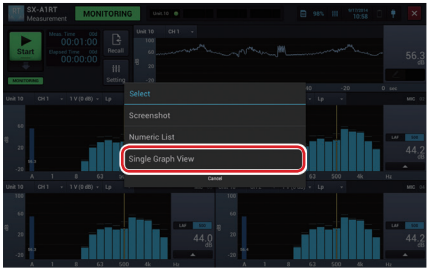
When using the multiple graph display (two or four graphs), you can zoom in on the selected graph for the single graph view.

MEMO	- You can zoom in on a graph when using the multiple graph view. You cannot zoom in when using the single graph view. - The number of graphs to display can be selected from [Graph Settings] in [Measurement Settings]. (P.60)

1. Tap [▲] on the graph on which you want to zoom in.



2. Tap [Single Graph View] on the graph.



The selected graph is displayed all in the graph display area.

MEMO	- The graph view can also be switched by double-tapping a graph.

Returning the Graph to the Multiple View

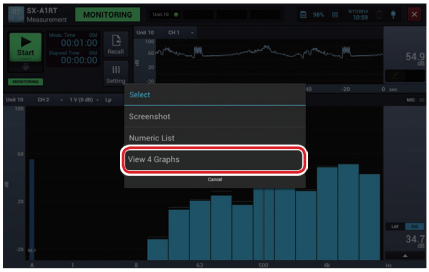
You can return the graph view displayed all in the graph display area (single graph view) to the original multiple view.

MEMO	- You can zoom out of a graph when using the multiple graph view. You cannot zoom out when using the single graph view.

1. **Tap [▲] on the graph of which you want to zoom out.**



2. **Tap [View 2 Graphs] (or [View 4 Graphs]).**



The graph is returned to the multiple view.

MEMO	- The graph view can also be switched by double-tapping a graph.

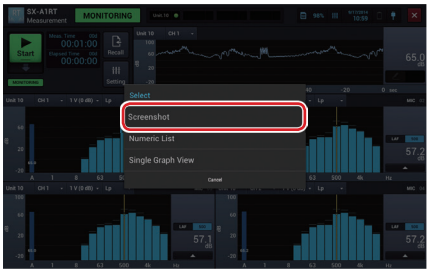
Capturing the Graph

Graph capture is a function to save a graph currently displayed in a PNG format image file.

1. **Tap [▲] on the graph you want to capture.**



2. **Tap [Screenshot].**



MEMO	- A captured graph image file is highlighted and saved. - A file of graph image captured during measurement is saved in the project folder. - A file of graph image captured other than during measurement is saved in the [Others] folder created in a SD memory card. - You can use the function key to capture all graphs currently displayed on the screen.

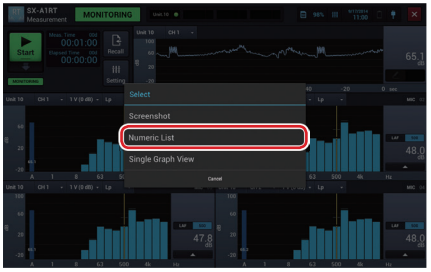
Switching the Graph View to the Numeric List View

The graph view can be switched to the numeric list (list view).

1. **Tap [▲] on the graph.**



2. **Tap [Numeric List].**



Switches to the numeric list view.

MEMO	- The cursor position on a graph is linked to the selected value (yellow background) on the numeric list.

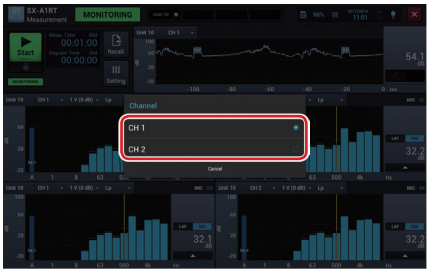
Changing the Display Contents on Graphs

The graph of the selected channel, input range, and calculation value is displayed. Changing the selection changes the graph view.

1. **To change the channel, tap the channel number.**



2. **Tap the channel number to display.**



3. To change the input range, tap the input range.



MEMO	- Configure the setting so that OVERLOAD is not displayed when the input range is changed.

4. Tap the input range to display.



5. **Change the calculation value to display on graphs, tap the calculation value.**



6. **Tap the calculated value type to display.**



Moving the Cursor

To move the frequency band cursor on the graph, slide the cursor to the left or right while tapping. The cursor can also be moved by tapping a desired point on the graph.



Slide to configure the cursor position

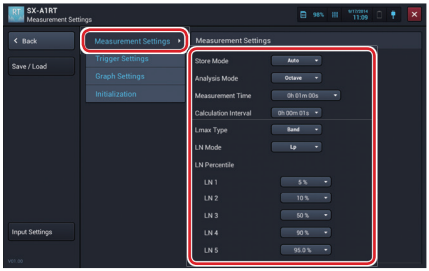
Settings

Configuring the Measurement Method

1. **Tap [Setting] on the Measurement screen.**



2. **Tap [Measurement Settings] to configure each item for the measurement method.**

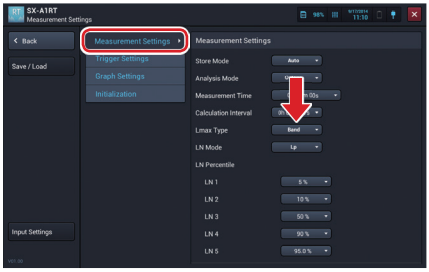


MEMO	- If there are many items, not all of them are displayed in one screen. Scroll the screen down. - For details on settings for each item, see "Manual" provided with this unit.

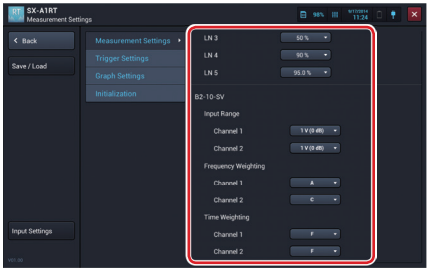
Configuring Amplifier Items

1. **Tap [Setting] on the Measurement screen.**

2. **Tap [Measurement Settings] and scroll the screen down.**



3. **Configure each item for the amplifier.**



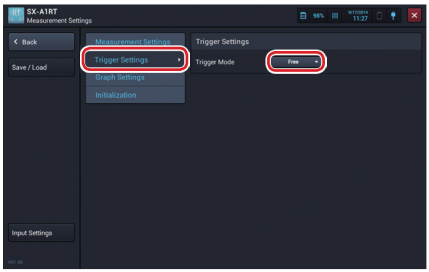
MEMO	- For details on settings for each item, see "Manual" provided with this unit.

Configuring the Trigger (Store Mode: [Auto])

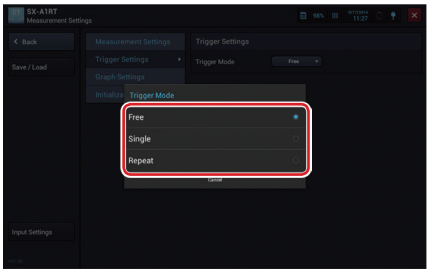
Configure the trigger conditions for starting measurement.

1. **Tap [Setting] on the Measurement screen.**

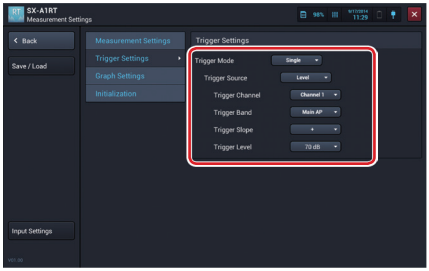
2. **Tap [Trigger Settings] and tap [▼] on the right side of [Trigger Mode].**



3. **Tap the trigger mode to configure.**



4. **If you select [Single] or [Repeat], configure the trigger conditions.**

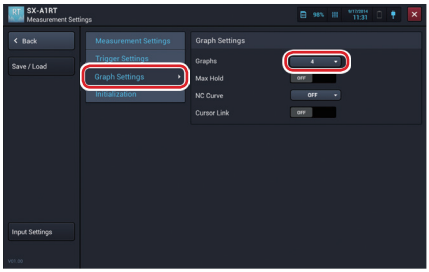


MEMO	- For details on settings for each item, see "Manual" provided with this unit.

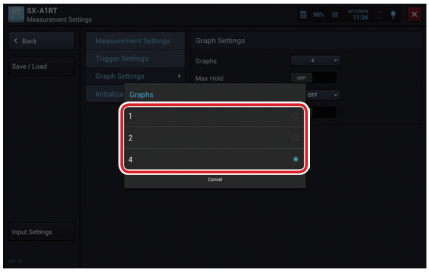
Configuring the Number of Graphs to Display

1. **Tap [Setting] on the Measurement screen.**

2. **Tap [Graph Settings] and tap [▼] on the right side of [Graphs].**



3. **Tap the number of graphs to display.**

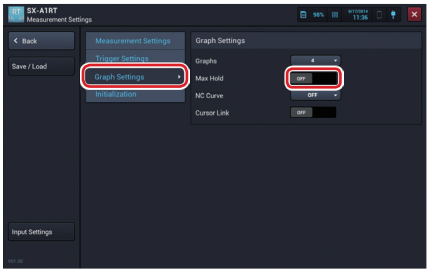


Configuring the Max Hold

Set the function to hold and display the maximum level of each frequency band graph for one second on the Measurement screen.

1. **Tap [Setting] on the Measurement screen.**

2. **Tap [Graph Settings] and tap [ON] or [OFF] in [Max Hold].**



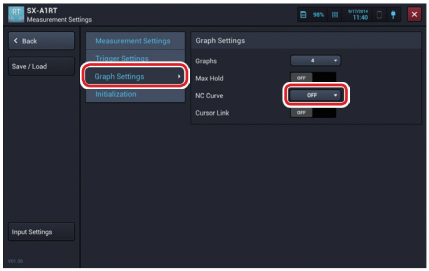
MEMO	- If you set it to "ON", the Max Hold is enabled. If you set it to "OFF", the Max Hold is disabled. - The settings can be switched by each tapping.

Configuring the NC Curve

Set the function to display the curve that indicates noise tolerance by frequency on a graph of recall data calculation value.

1. **Tap [Setting] on the Measurement or Recall screen.**

2. **Tap [Graph Settings] and tap [▼] on the right side of [NC Curve].**



3. **Tap [NC Curve].**



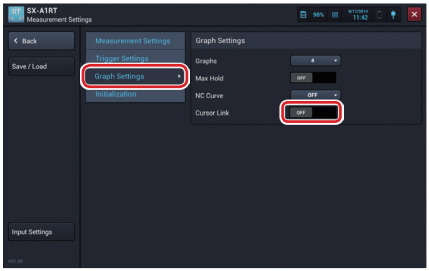
MEMO	- If you do not set [Analyze Mode] to [Octave] in [Measurement Settings], [NC Curve] cannot be set. Also, if [Calculated Values] is not set to [Leq], an NC curve is not displayed on a graph.

Configuring the Cursor Link

Set the function to make a link of all cursor positions on multiple graphs displayed to the same frequency band.

1. **Tap [Setting] on the Measurement or Recall screen.**

2. **Tap [Graph Settings] and tap [ON] or [OFF] in [Cursor Link].**



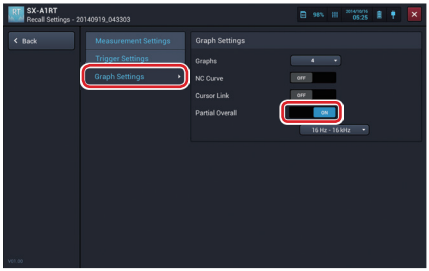
MEMO	- If you set it to "ON", the Cursor Link is enabled. If you set it to "OFF", the Cursor Link is disabled. - The settings can be switched by each tapping.

Configuring the Partial Overall

Set the function to display the power sum for arbitrarily selected frequency bands (partial overall).

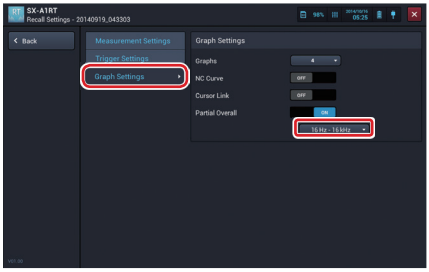
1. **Tap [Setting] on the Recall screen.**

2. **Tap [Graph Settings] and tap [ON] or [OFF] of [Partial Overall].**

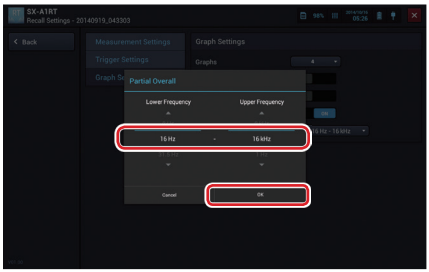


MEMO	- Select [ON] to enable the partial overall. Select [OFF] to disable the partial overall. - The settings can be switched by each tap.

3. **Tap the frequency bandwidth for power sum displayed when the partial overall is enabled to display the setting screen for lower and upper frequencies.**



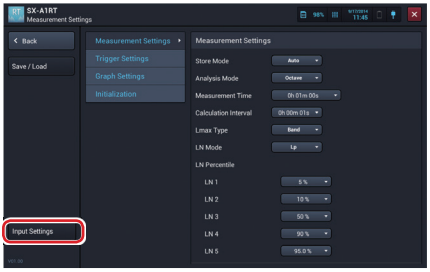
4. **Set each center frequency and tap [OK].**



Calibrating

1. **Tap [Setting] on the Measurement or Recall screen.**

2. **Tap [Input Settings].**

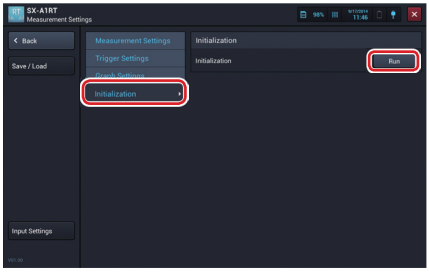


MEMO	- For details on Input Settings, see "Configuring the Calibration" in the RION-OTE Instruction Manual.

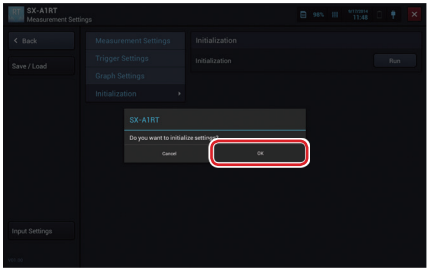
Initializing the Settings

1. **Tap [Setting] on the Measurement screen.**

2. **Tap [Initialization] and then [Run].**



3. **Tap [OK].**



The default settings are as follows.

Item		Default
Measurement Settings	Store Mode	Manual
	Analyze Mode	Octave
	Measurement Time	10 m
	Calculation Interval	10 m
	Lmax Type	Band
	LN Mode	Lp
	LN Percentile LN1	5%
	LN Percentile LN2	10%
	LN Percentile LN3	50%
	LN Percentile LN4	90%
	LN Percentile LN5	95.0%
	Input Range	10 V
	Frequency Weighting	Z
	Time Weighting	F
Trigger Settings	Trigger Mode	Free
	Trigger Source	Level
	Trigger Channel	Channel1
	Trigger Band	Main
	Trigger Slope	+
	Trigger Level	70
	Repeat Count	2
	Start Date and Time (Year/Month/Day)	Current date
	Start Date and Time (Hour:Minute)	Current time + 5 minutes
	Stop Date and Time (Year/Month/Day)	Current date + 1 day
	Stop Date and Time (Hour:Minute)	Current time + 5 minutes
	Interval	1 hour

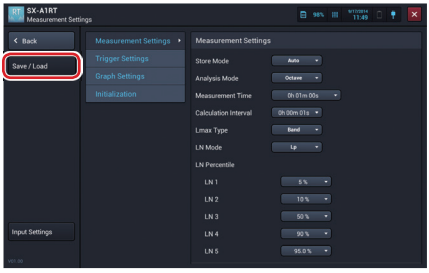
Item		Default
Graph Settings	Graphs	2
	NC Curve	Disabled
	Max Hold	OFF
	Cursor Link	OFF
Measurement Screen	Calculated Values	Lp

Save the Current Settings

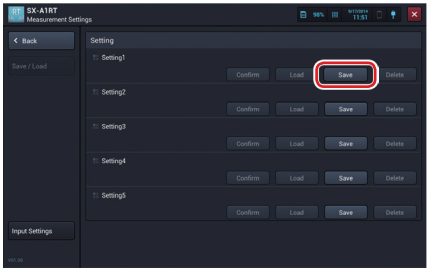
You can save settings configured in the Measurement settings screen. This allows you to load and restore the settings whenever you want. It is useful to save frequently-used settings.

1. **Tap [Setting] on the Measurement screen.**

2. **Tap [Save / Load].**

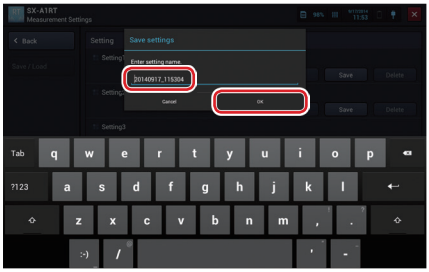


3. **Tap [Save].**

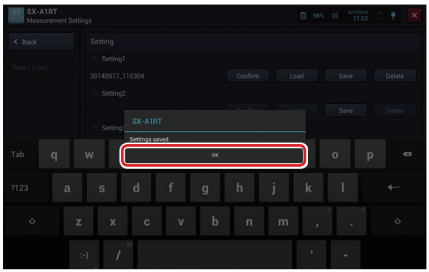


MEMO	- If you tap [Save] in a memo already saved, new settings overwrite the old settings.

4. Enter the name to save and tap [OK].



5. Tap [OK].



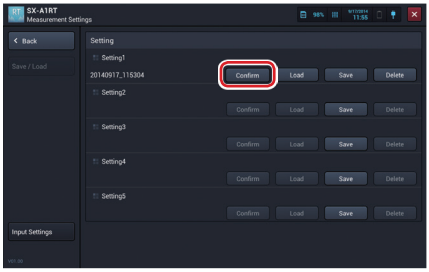
MEMO	- You can save up to five settings.

Confirming the Saved Settings

1. **Tap [Setting] on the Measurement screen.**

2. **Tap [Save / Load].**

3. **Tap [Confirm] in the settings to check.**



4. **Check the settings and then tap [Close].**

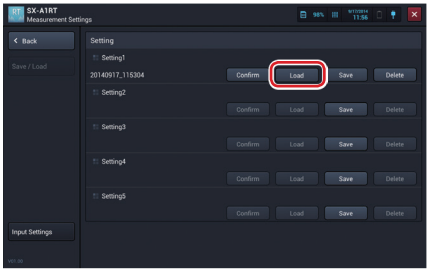


Load the Settings

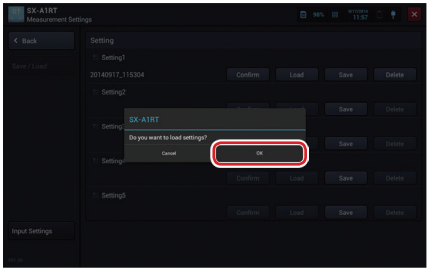
1. **Tap [Setting] on the Measurement screen.**

2. **Tap [Save / Load].**

3. **Tap [Load] in the settings to load.**

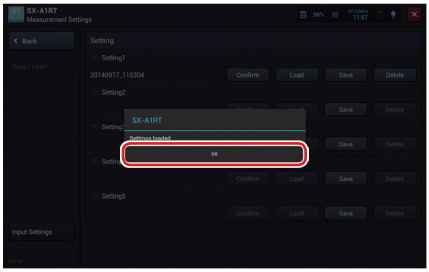


4. **Tap [OK].**



The settings are loaded.

5. **Tap [OK].**



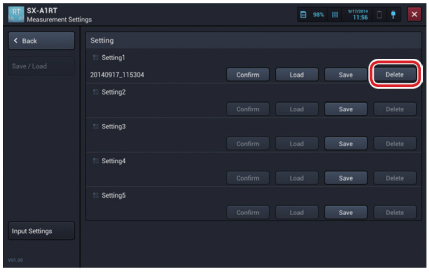
MEMO	- If you load the settings, the current settings will be deleted.

Delete the Settings

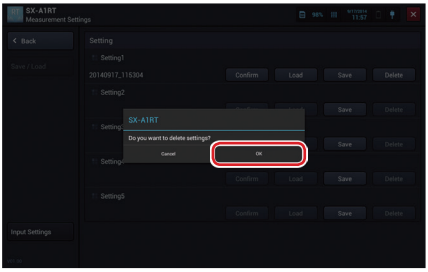
1. **Tap [Setting] on the Measurement screen.**

2. **Tap [Save / Load].**

3. **Tap [Delete] in the settings you want to delete.**

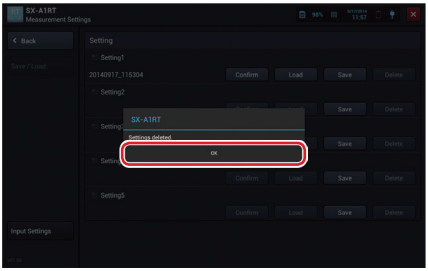


4. **Tap [OK].**



The settings are deleted.

5. **Tap [OK].**



Specifications

Applied Standards

These standards are applied when SXA1-RT is integrated with RIONOTE and SA-A1B-2/B4.

JIS C 1513: 2002 Class 1

JIS C 1514: 2002 Class 1

IEC 61260: 2014 Class 1

ANSI S1.11-2004 Class 1

Analyzed Frequencies

Octave Band Analysis

Octave Band Filter

0.5 Hz - 16 kHz

12th-order butterworth bandpass digital filter

Center frequency Base-10

1/3 Octave Band Analysis

1/3 octave band filter

0.4 Hz - 20 kHz

6th-order butterworth bandpass digital filter

Center frequency Base-10

Up to four channels for octave band analysis and three channels for 1/3 octave band analysis

Frequency Weighting

A, C or Z

Time Weighting

F (Fast), 630 ms, S (Slow) or 10 s

Calculation Data

Measure the following items by the selected time weighting and frequency weighting.

Instantaneous Value Data

Main Channel

Time Weighting Level	L_p
Time Average Level	L_{eq}
Maximum Time Weighting Level	L_{max}
Minimum Time Weighting Level	L_{min}
Peak Level	L_{peak}

Octave band / 1/3 octave band analysis

Time weighting level	L_p
Time average level	L_{eq}
Maximum time weighting level	L_{max}

Calculation Value Data

Main Channel

Time average level	L_{eq}
Exposure level	L_E
Maximum time weighting level	L_{max}
Minimum time weighting level	L_{min}
Peak Level	L_{peak}
Five percentile levels L_N (One of them can be set at 0.1% interval)	

Octave band/1/3 octave band analysis

Time average level	L_{eq}
Exposure level	L_E
Maximum time weighting level	L_{max}
Five percentile levels L_N (One of them can be set at 0.1% interval)	

L_{max} Type

Select either Band or AP (main channel)

L_N Type

Select either L_p or $L_{eq,1s}$

Measurement Time

Set arbitrarily from 1 to 59 seconds (at 1-sec interval), 1 to 59 minutes (at 1-min interval) and 1 to 1000 hours (at 1-hour interval).

Calculation Time (Auto Store)

Set arbitrarily from 1 to 59 seconds (at 1-sec interval), 1 to 59 minutes (at 1-min interval) and 1 to 24 hours (at 1-hour interval).

Store Mode

Manual Store

Record the results of the measurement performed for a set time in a SD memory card inserted to RIONOTE.

Auto Store

Record the results of the measurement performed for a set time in a SD memory card inserted to RIONOTE at every predetermined calculation time.

Instantaneous value data (Tshort data)

Store cycle 100 ms

Calculation value data (Tlong data)

Calculation interval 24 hours at maximum

* The instantaneous value and calculation value data are measured at the same time.

The recording time to a SD memory card depends on the SD memory card capacity (operation guarantee is limited to the cards provided by RION Co., Ltd.).

Trigger Measurement

Measurement starts when trigger conditions are met.

The trigger measurement settings is available only when the store mode is auto.

Trigger Measurement Settings

Trigger Mode: Free, Single, Repeat

Trigger Source: Level, Time, External

Settings for Level Trigger

Trigger Channel

Trigger Band

Trigger Slope: +, -

Trigger Wave Level: 30 dB to 130 dB

Repeat Count: 2 to 1000

Settings for Time Trigger

Start Time

Stop Time

Interval:

8 hours, 1 hour, 30 minutes, 15 minutes, 10 minutes, 5 minutes

Settings for External Trigger

Repeat count: 2 to 1000

* Setting item for repeat trigger

Graph Display

Graph Display

Display octave band analysis results with a graph.

Up to four graphs are displayed simultaneously.

Cursor Display

Display the cursor on a graph.

Display a label indicating the band level at the cursor position.

The cursors on graphs can be synchronized with one another by the setting.

Overload Display

Display the Inst. Over indication when an excessive signal is input during monitoring or measurement.

Once an instantaneous overload occurs during measurement, the indication of excessive calculation value is displayed after Inst. Over lights up.

Memo/Marker Display

Display a marker inserted during measurement.

Numeric List Display

Display frequency bands and level values on a numeric list.

Partial Overall Display

Display the partial overall of the selected band range on the recall screen.

Room Noise Level (NC value from the following document)

NC value L.L.Beranek (ed): Noise and vibration control. McGraw-Hill Book Company, New York, 1971

NC value: From NC-15 up to NC-65

NC curve: Presented only when L_{eq} is displayed during octave band analysis.

Memo/Marker Input

Insert a memo/marker to measured data.

Recall Load a saved project.

Interval Calculation

Perform re-calculation for a selected calculation range in recall data.

Result Output Output re-calculation results as a file.

Exclusion Setting

Set the interval excluded from re-calculation.

Memo/Marker Edit

Edit a marker inserted to measured data or add a new marker.

Function Button

Screen Capture

Capture the entire screen and save it as an image file.

Pause/Unpause

Stop screen update temporarily in the manual store mode.

Measure Start/Stop

Start measurement by pressing the function button during monitoring.

Stop measurement by pressing the function button again during measurement.

Initialization Initialize the settings.

Media SD memory card (512 MB)

Dimensions and Weight

32 mm (L) x 24 mm (W) x 2.1 mm (T)

Approx. 5 g

Supplied accessories

Inspection certificate	1



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