RION

Class 1 Sound Level Meter NL-53
Class 2 Sound Level Meter NL-43

Instruction Manual

Communication Guide

Organization of the NL-43/NL-53 Instruction Manual

There are four types of instruction manuals for Class 2 Sound Level Meter NL-43 and Class 1 Sound Level Meter NL-53.

Quick Start Guide

This manual describes the basic handling of Sound Level Meter NL-43/NL-53.

Operation Guide

This manual describes how to use Sound Level Meter NL-43/NL-53, how to connect and use peripheral devices such as sound level recorders and printers, and what to do when using an SD card.

Communication Guide (This Document)

This manual describes communication between a computer and Sound Level Meter NL-43/NL-53 via a serial interface. It describes such topics as the communication protocol, commands for controlling the sound level meter, and data output from the sound level meter.

Technical Guide

This manual is a technical guide to the sound level meter and noise measurements, including the performance of Sound Level Meter NL-43/NL-53, microphone structure and characteristics, and how extension cables and windscreens affect measurements.

You can download the Instruction Manuals from our website:

https://rion-sv.com/nl-43_53_63/manual/

Contents

1 Common

1.1 Outline

The Class 2 Sound Level Meter NL-43 and Class 1 Sound Level Meter NL-53 can control devices, transfer files, and use the web application by communicating via the RS-232C connection and the USB cable or LAN.
This document describes how to use each communication function.

1.2 States in which communication is not possible

When the device is in the following states, it cannot perform communication control and transfer data:

- When starting up
- When shutting down
- When in sleep mode

2

RS-232C Connection

2.1 Communication control

The device and a computer can be connected using the RS-232C serial I/O cable CC-42R (optional), enabling communication control and data transfer.
For information about the commands, refer to Page 30 onward.

Important

- Make sure the orientation is correct when inserting the cable into the I/O port.

Note

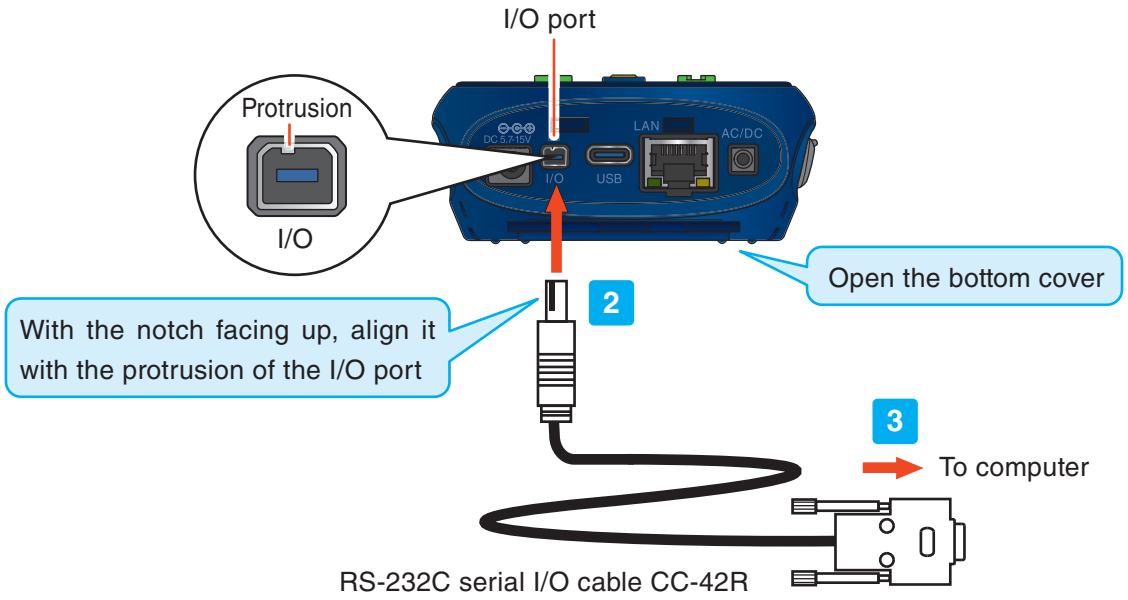
- When connecting the device and a computer, the measurement lower limit level of the device may rise due to noise from the computer.
- When using the RS-232C communication function, you cannot configure the USB connection or LAN TCP settings.

Set the communication function of the device by following the procedure below.

1 **Open the bottom cover of the device.**

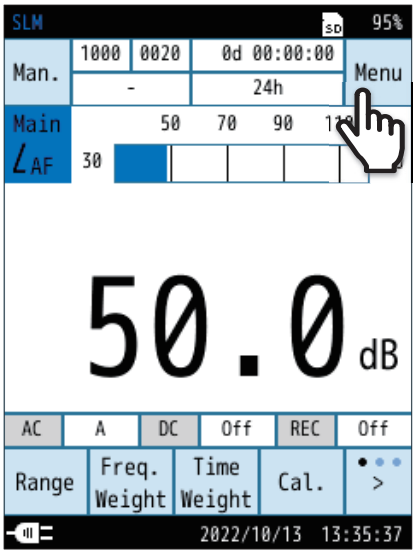
2 **Insert the connector of the RS-232C serial I/O cable CC-42R into the I/O port of the device.**

3 **Plug the other end of the cable into the RS-232C port of the computer.**



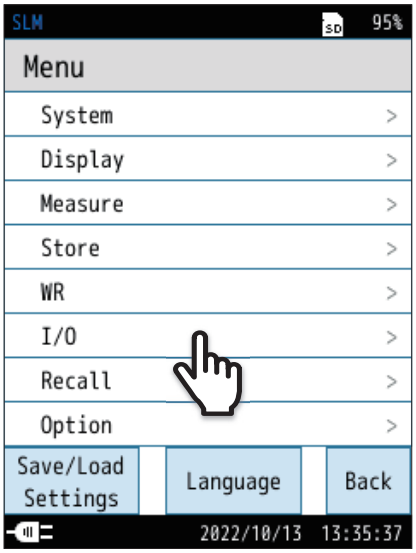
4 Touch [Menu] on the measurement screen.

The [Menu] screen appears.



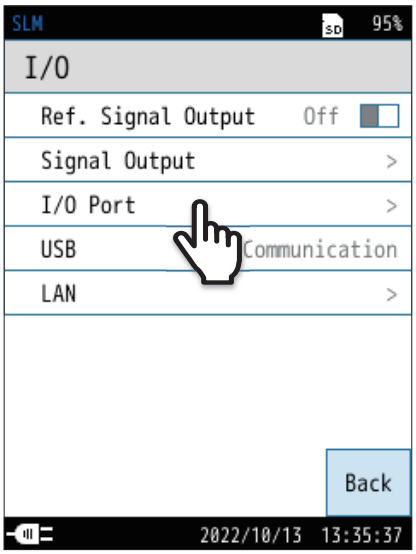
5 Touch [I/O] on the [Menu] screen.

The [I/O] screen appears.

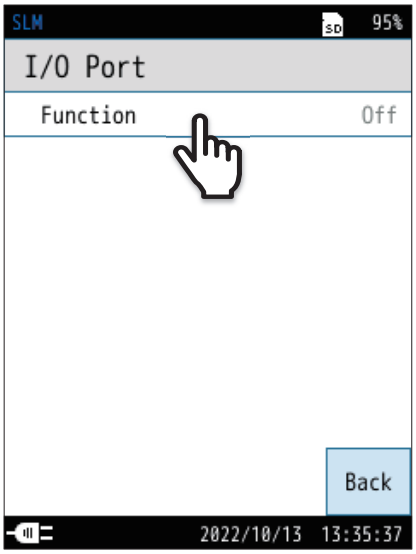


6 Touch [I/O Port] on the [I/O] screen.

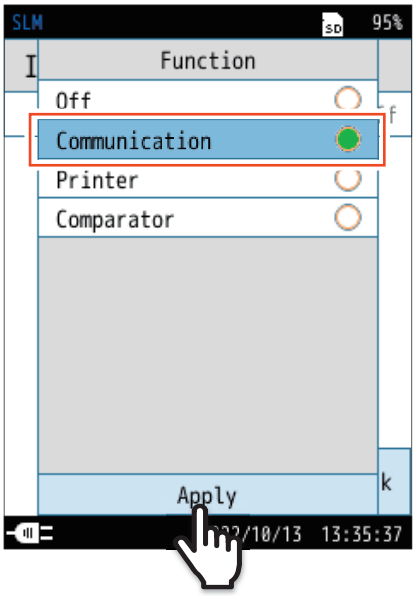
The [I/O Port] screen appears.



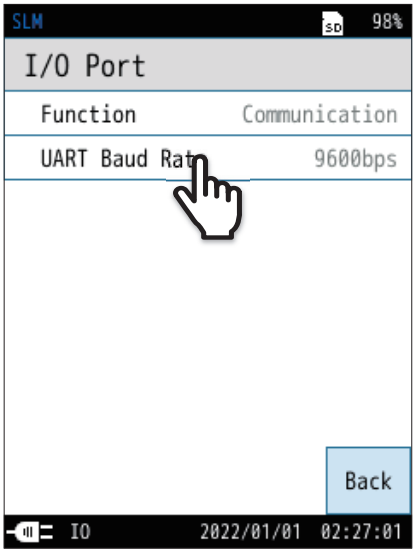
7 Touch [Function] on the [I/O Port] screen.



8 Select [Communication], and touch [Apply].

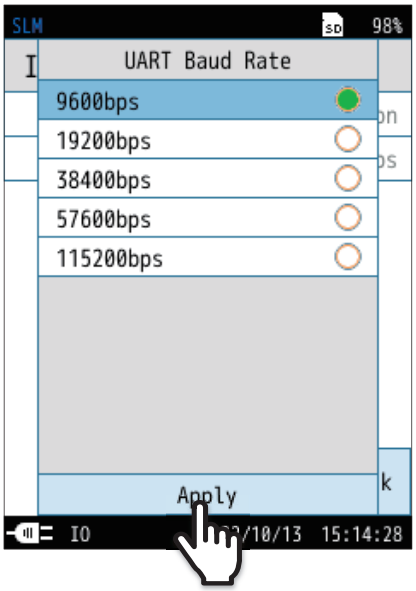


9 Touch [UART Baud Rate] on the [I/O Port] screen.



10 Select a baud rate, and touch [Apply].

UART Baud Rate can be selected from 9600 bps, 19200 bps, 38400 bps, 57600 bps, and 115200 bps.



11 Touch [Back] or press the START/STOP key to return to the measurement screen.

Transmission method

The transmission method of the device is as follows.

Communication method	Full duplex
Synchronization method	Asynchronous
Communication speed	9600 bps, 19200 bps, 38400 bps, 57600 bps, 115200 bps
Data length	8 bit
Stop bit	1 bit
Parity	None
Flow control	None

3 USB Connection

3.1 Communication control

The device can communicate and transfer saved data files by way of a USB connection.
For information about the commands, refer to Page 30 onward.

Compatible OS

- Microsoft Windows 10 Pro (64 bit)
- Microsoft Windows 11 Pro (64 bit)

Important

- Directly connect the computer and the device with the USB cable. If you connect the computer and the device via the likes of a USB hub, there is a possibility that they may not operate normally.

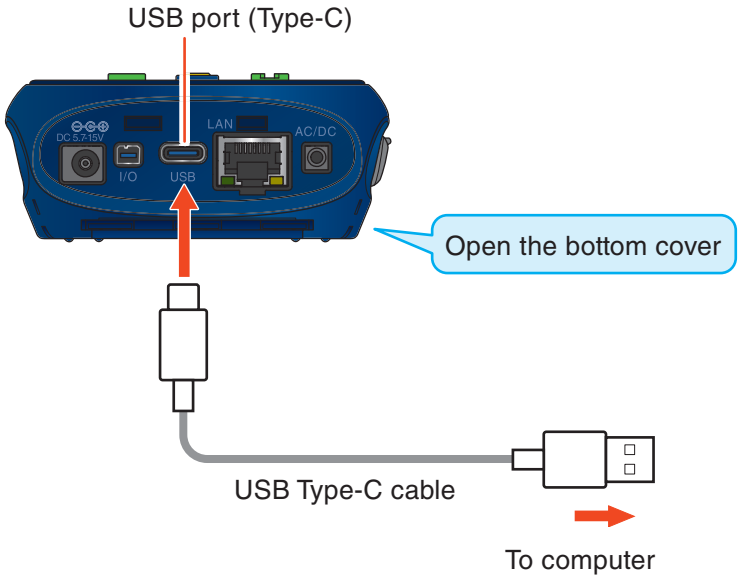
Note

- When connecting the device and a computer, the measurement lower limit level of the device may rise due to noise from the computer.
- When using the USB communication function, you cannot configure the RS-232C communication or LAN TCP settings.
- When using the USB communication function, it is not necessary to install the USB driver. The driver is installed automatically when you connect the device to a computer with a compatible operating system via a USB cable.

Set the communication function of the device by following the procedure below.

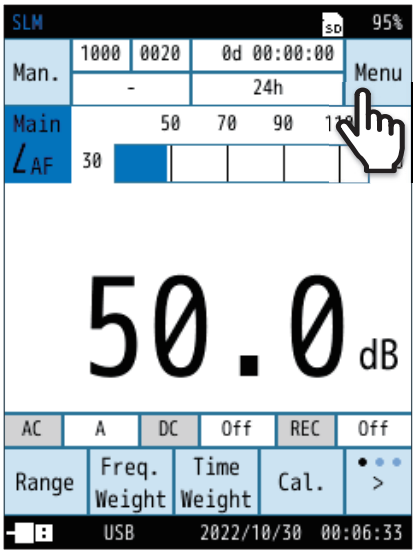
1 **Open the bottom cover of the device.**

2 **Insert the USB Type-C connector into the USB port of the device and computer.**



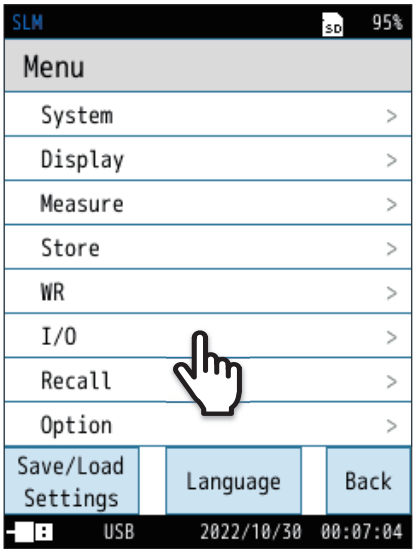
3 Touch [Menu] on the measurement screen.

The [Menu] screen appears.



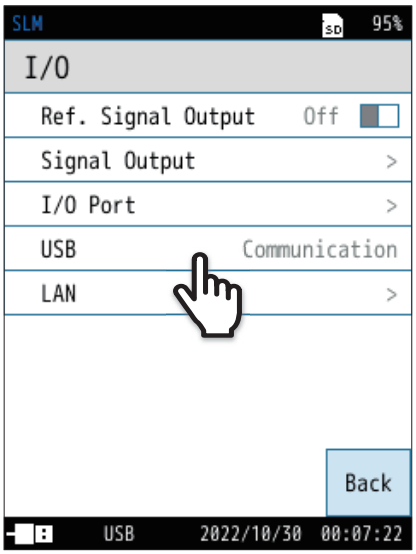
4 Touch [I/O] on the [Menu] screen.

The [I/O] screen appears.

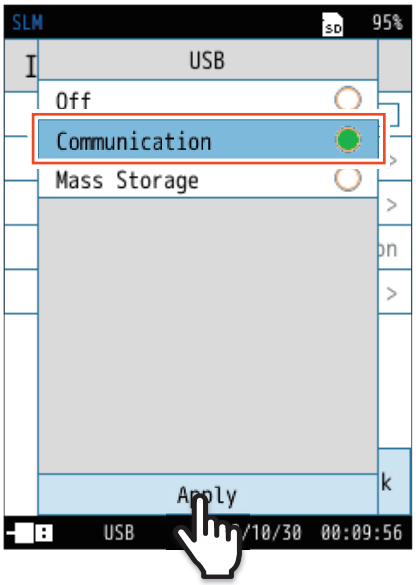


5 Touch [USB] on the [I/O] screen.

The [USB] screen appears.



6 **Select [Communication], and touch [Apply].**



7 **Touch [Back] or press the START/STOP key to return to the measurement screen.**

3.2 Data file transfer

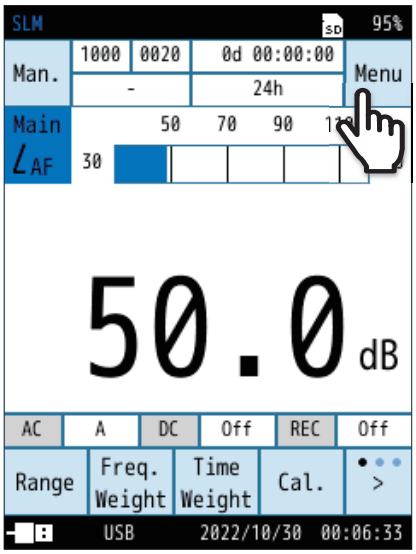
When using mass storage, you can view and copy SD card files on the computer.

Note

- When using mass storage, commands other than USB Class will not be accepted. When communicating, you need to switch to communication with a USB Class command again.

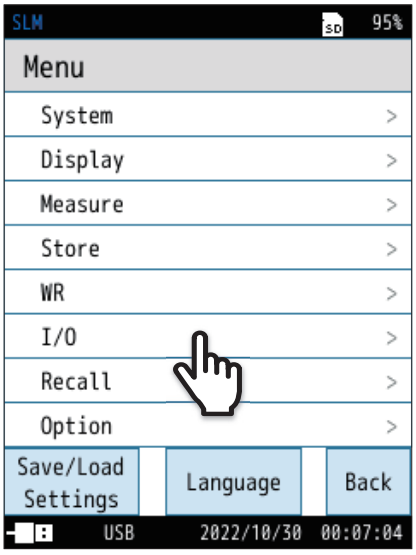
1 Touch [Menu] on the measurement screen.

The [Menu] screen appears.



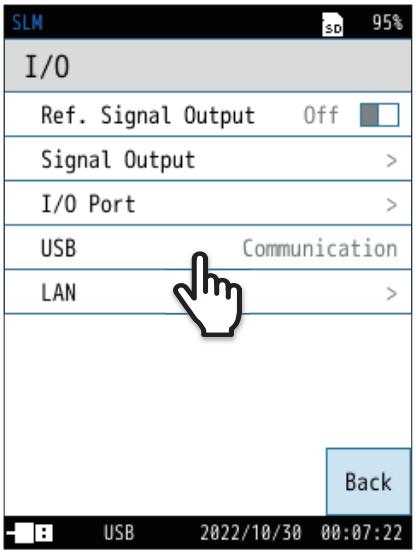
2 Touch [I/O] on the [Menu] screen.

The [I/O] screen appears.



3 Touch [USB] on the [I/O] screen.

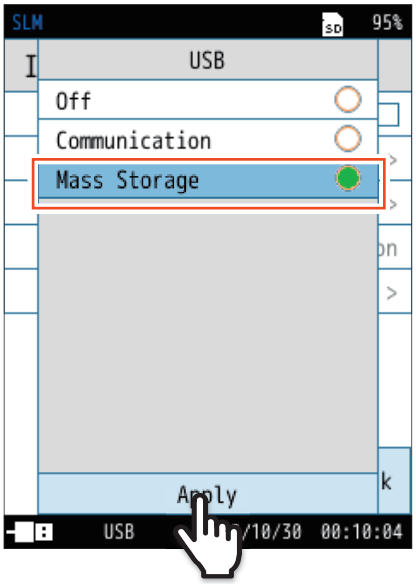
The [USB] screen appears.



4 Select [Mass Storage], and touch [Apply].

The device and the computer are connected.

- Once recognized as a removable disk, measurement data, screen notes, calibration history data, setting conditions, etc. saved on the device can be displayed and checked in the USB drive folder.
- To remove the main unit, remove the main unit from the computer, and then touch [Remove Device] on the main unit display screen.



4

LAN Connection

By using a LAN cable, you can perform operations such as communication (TCP) and file transfers (FTP) like on the device but from the web application.
For details, refer to the “Operation Guide”.

Important

- Directly connect the computer and the device with the LAN cable.

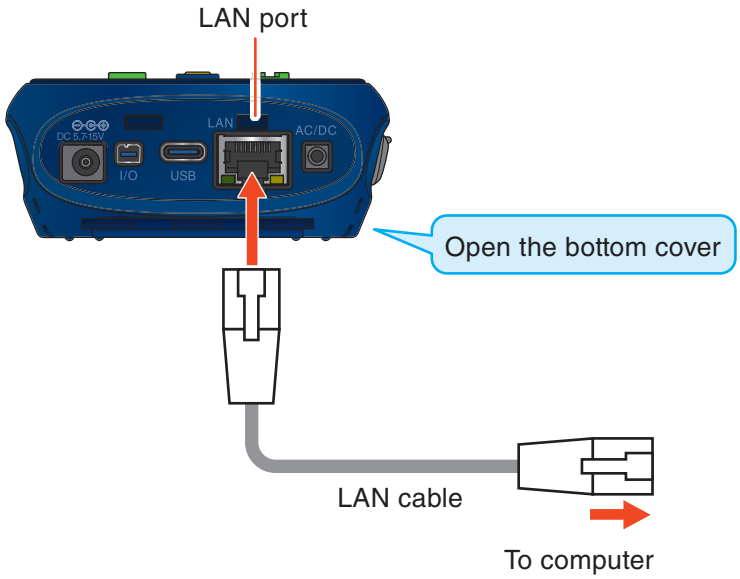
Note

- When connecting the device and a computer, the measurement lower limit level of the device may rise due to noise from the computer.
- To use this function, you must first install the function extension program NX-43EX beforehand.

Set the communication function of the device by following the procedure below.

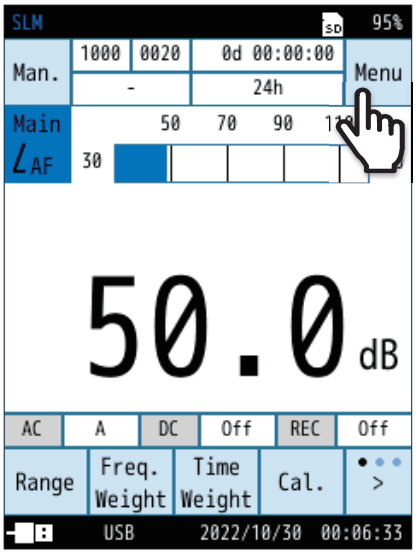
1 **Open the bottom cover of the device.**

2 **Insert the connector of the LAN cable into the USB ports of the device and computer.**



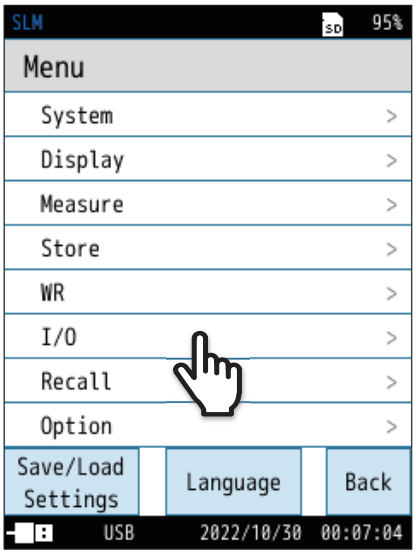
3 Touch [Menu] on the measurement screen.

The [Menu] screen appears.



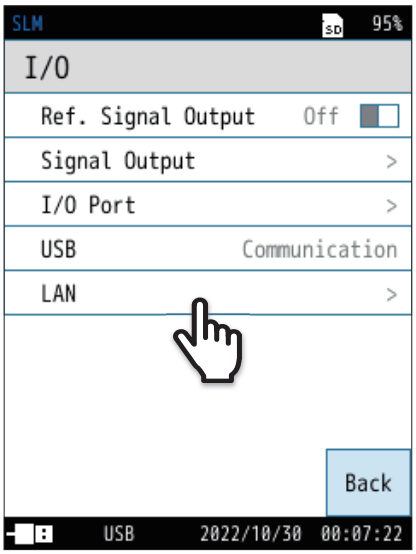
4 Touch [I/O] on the [Menu] screen.

The [I/O] screen appears.

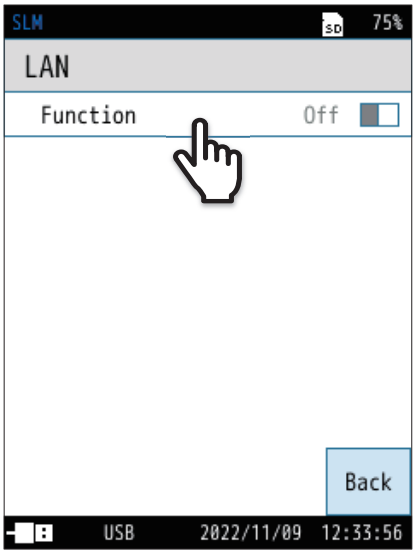


5 Touch [LAN] on the [I/O] screen.

The [LAN] screen appears.

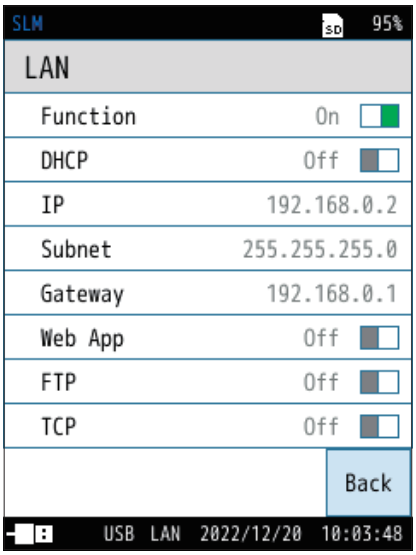


6 Touch [Function] on the LAN screen to set it to [On].



7 Configure the LAN-related settings.

Item	Description
Function	Turns on/off the LAN function.
DHCP	Automatically sets the IP address, subnet, and gateway of the device.
IP	Sets the IP address of the device and acquires the current settings.
Subnet	Sets the subnet mask and acquires the current setting.
Gateway	Sets the default gateway and acquires the current setting.
Web App	Turns on/off the web app.
FTP	Turns on/off file transferring.
TCP	Turns on/off communication control.

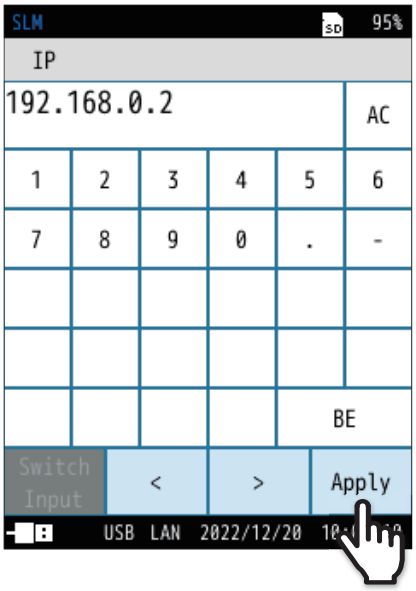


The IP address on the screen is an example.

8 Manually set the IP address, subnet, and gateway as necessary.

1. **Touch [IP] on the [LAN] screen.**
   The input screen for the IP address appears.
2. **Enter the IP address.**
   Touching [BE] deletes one character. Touching [AC] deletes all the entered characters.
3. **Touch [Apply].**

- Manually set the subnet and gateway in the same way.
- Configure the settings corresponding to communication.



The IP address on the screen is an example.

9 Touch [Back] or press the START/STOP key to return to the measurement screen.

4.1 Communication control (TCP)

Measurement values can be acquired and settings can be changed by using communication commands.
For information about the commands, refer to Page 30 onward.
The port number is 2255.

Note

- When using the LAN TCP function, you cannot configure I/O Port Communication or the USB connection settings.

4.2 Data transfer (FTP)

You can download data on the SD card by using the FTP client application. You can download data even while measuring.
The FTP client connects in Active mode.
The port number is 21.

Note

- When using the LAN TCP function, you cannot use USB mass storage.
- Do not delete files via FTP.

4.3 Web application

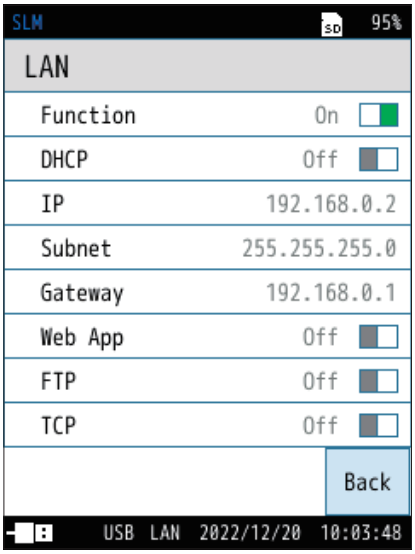
By accessing from a web browser on a computer or smartphone, you can perform measurement operations of the device, check/change settings, and download data from the SD card. 80 and 8000 are used for the port numbers.

* Octave·1/3 Octave Real-time Analysis Program NX-43RT (Optional) will be available soon.
* FFT Analysis Program NX-43FT (Optional) does not support Web application.

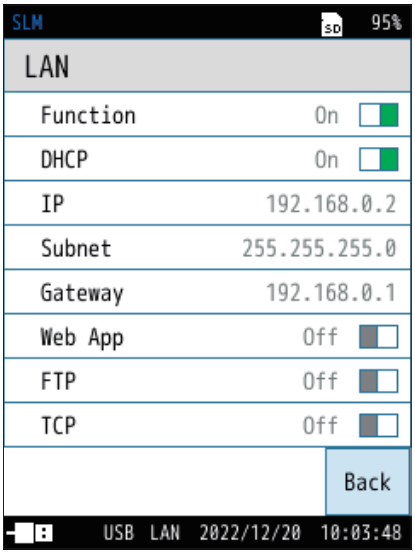
This section explains how to use the web application.

1 Touch on [I/O] - [LAN] on the [Menu] screen, and then configure the following settings.

When manually setting the IP address



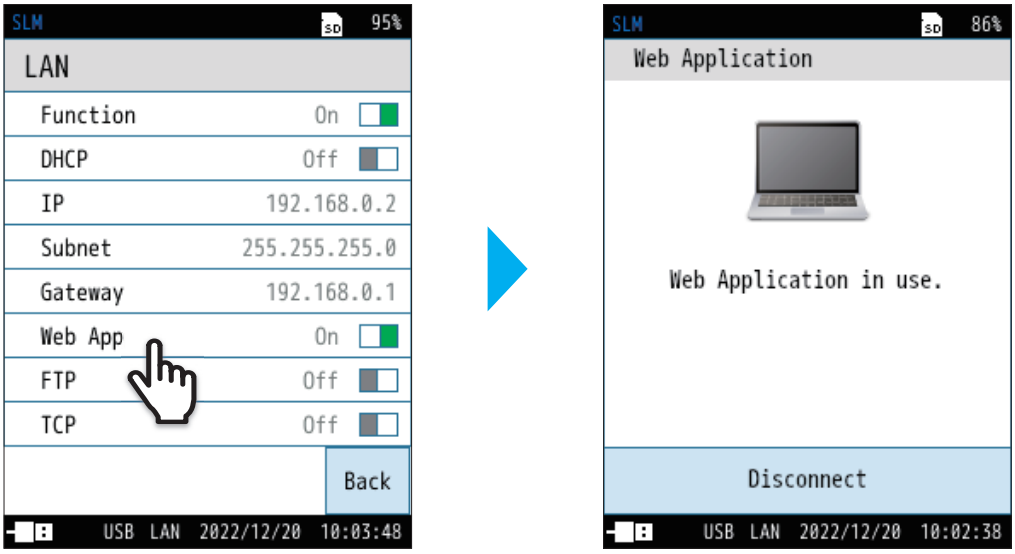
When automatically setting the IP address



The IP address on the screen is an example.

2 Turn on [Web App] on the [LAN] screen.

The [Web App] screen appears.



The IP address on the screen is an example.

Note

When using the web application, the following settings cannot be configured:

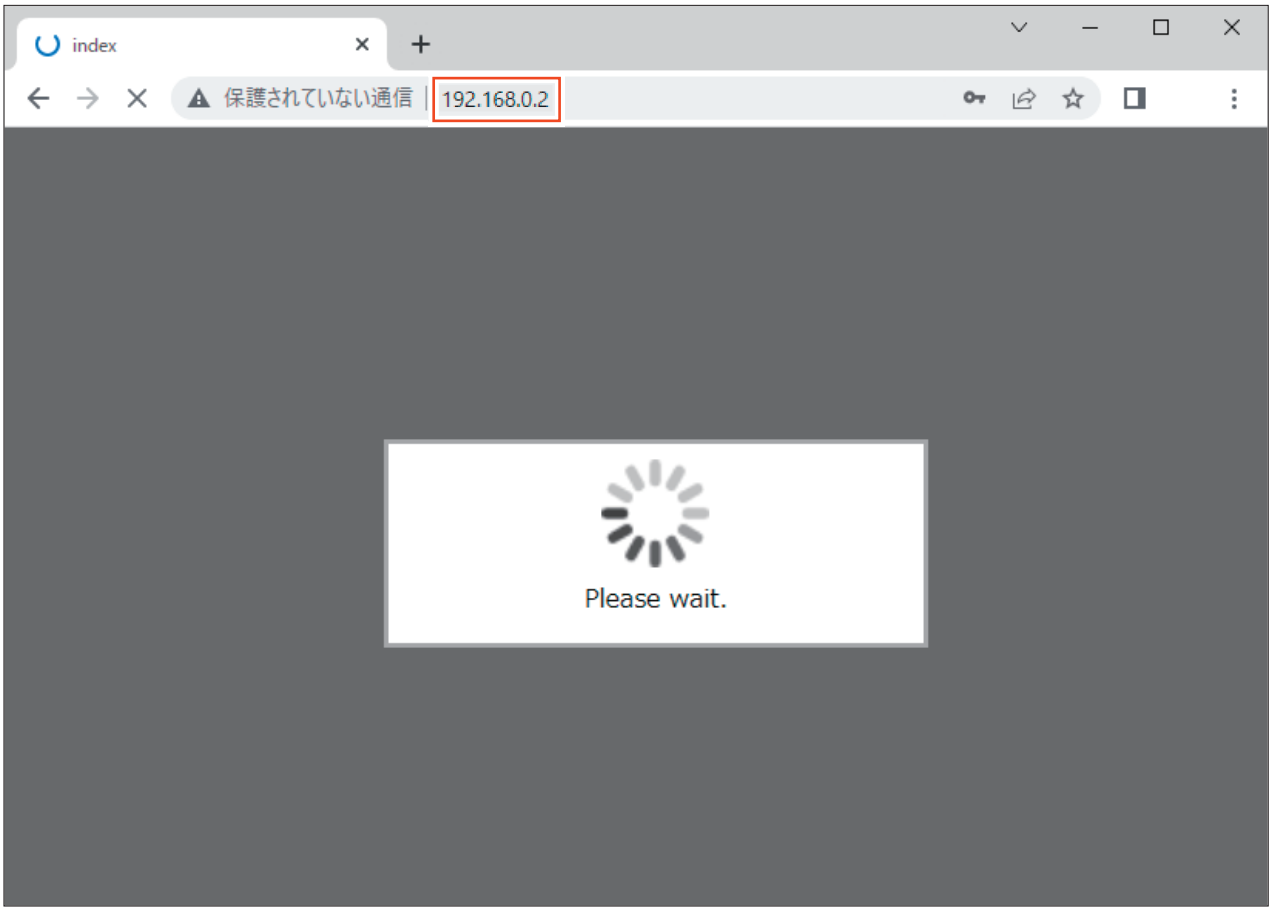
- Timer Auto store
- Trigger Mode
- Delay Time
- I/O Port Communication
- USB Connection
- LAN TCP
- LAN FTP

3 In your web browser, enter the IP address set on the device to access.

The [Login] screen appears.

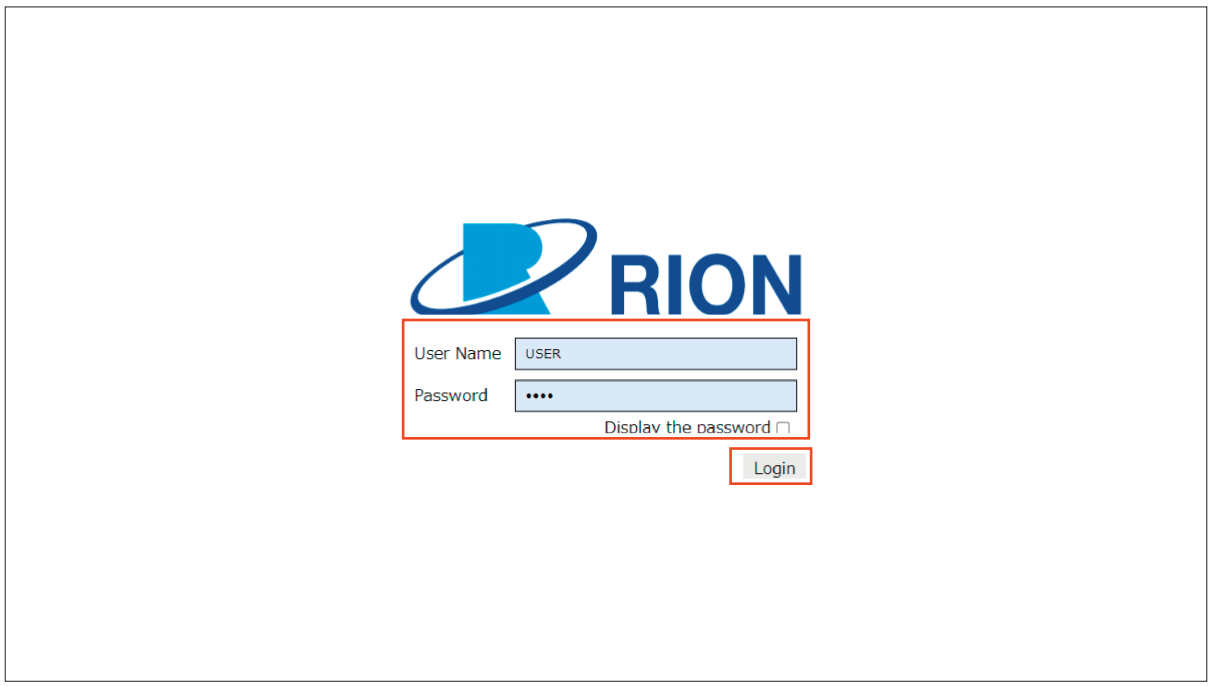
Note

- It is recommended to use the web browser Google Chrome on a computer. The sound will not play on other web browsers.
- The network settings must be configured on the computer that will be connected. Configure the network settings such as the computer's IP address so that you can connect with the device's network settings (IP address, subnet, gateway).

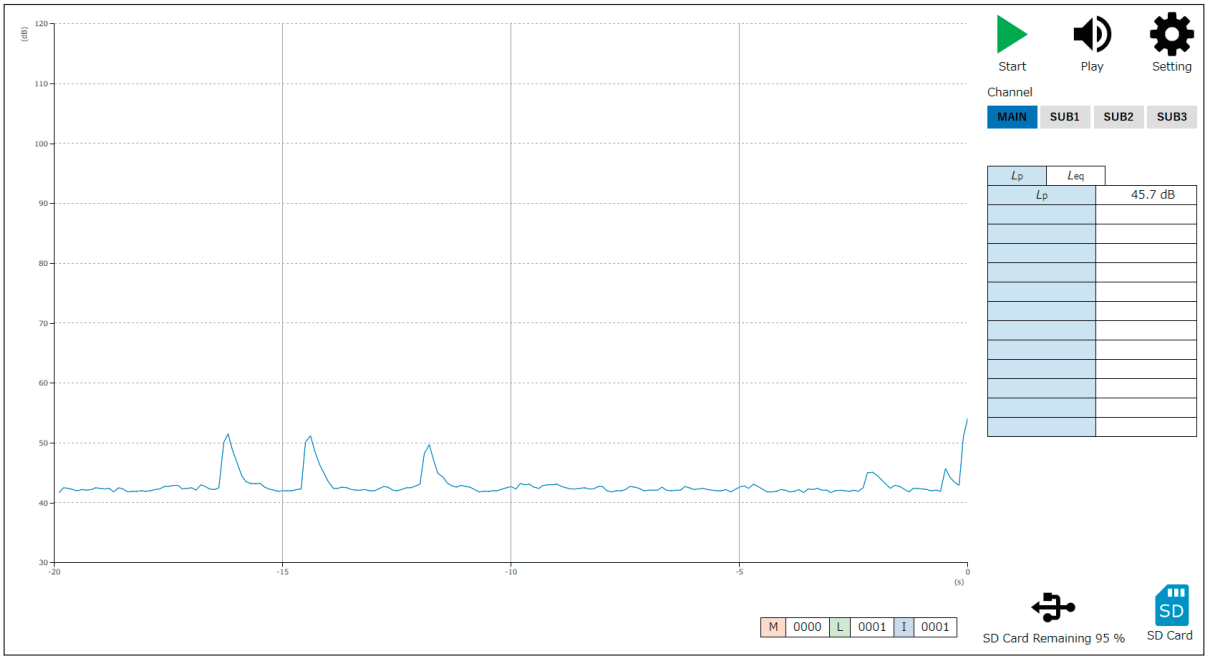


- Enter the IP address that was set in 4.3.
- The IP address on the screen is an example.

4 Touch [Menu] - [System] - [Security] on the device, enter your User Name and Password, and then click [Login].



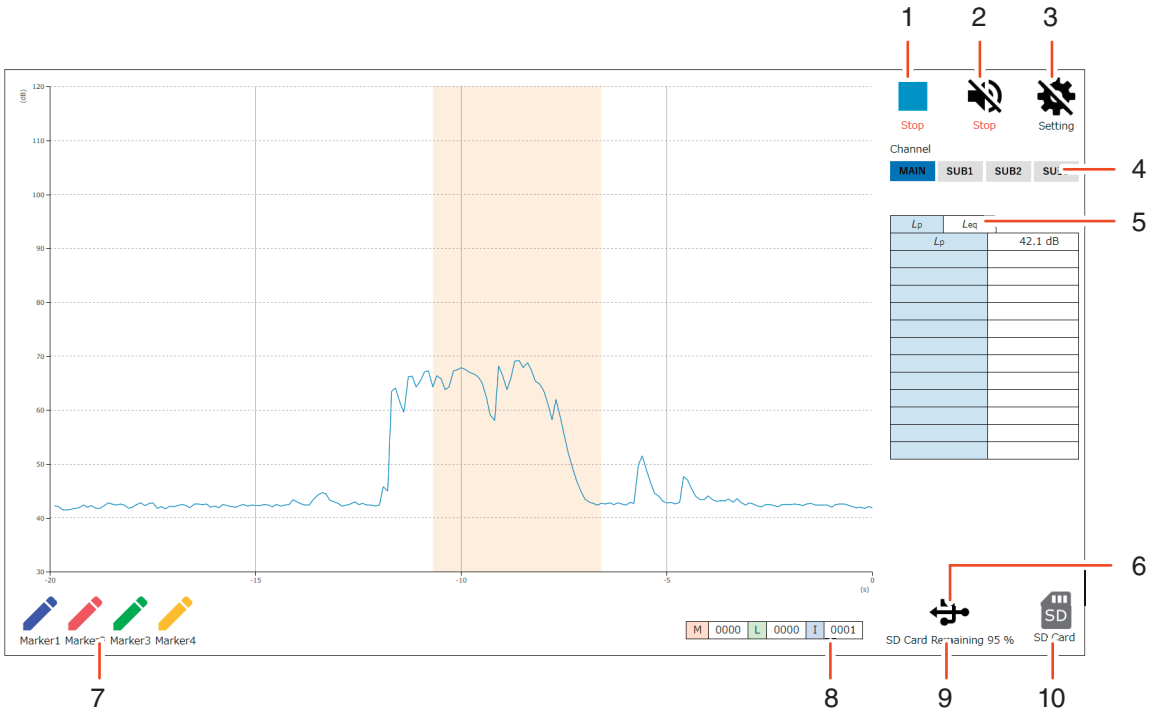
The following measurement screen appears.



4.3.1 Reading the display

Measurement screen

This screen shows general measurement information. You can start, stop, and play measurements, display graphs, transfer SD card data, etc.



No.	Name	Description
1	Start measuring	Starts taking measurements.
2	Play	The playback function can be used only when the Waveform Recording Program NX-43WR is installed. Play the sound in real time. You need to set waveform recording (Total, Event) to [On]. Playback sound works in conjunction with the frequency weighting (waveform) and recording range. You can change the playback volume by accessing the web app, clicking [Settings] - [Display] - [Upper Range], and then making changes. The lower the value that is set, the louder the playing volume.
3	Setting	Displays each settings screen.
4	Display channel	When you select the channel you want to display, the L_p/L_{eq} and T-L graphs appear.
5	Switch calculation	Switches the display of the instantaneous values and calculated values.
6	Battery type	Acquires the type of batteries used in the device.
7	Marker buttons	When the L_p Store Interval is set in Store mode, you can mark data while measuring.
8	Recording number display	The number of files recorded in Total recording or Event recording (Manual recording, Level recording, Interval recording) is displayed.
9	SD card remaining capacity	Displays the remaining capacity of the SD card.
10	SD card	You can check the data saved on the SD card.

Settings screen

This screen is for configuring various settings. When you click ⚙ on the measurement screen, the settings screen appears.

Select an item in the top left of the screen, and then enter the value you want to set.
When you click Setting in the bottom right of the screen, each entered value will be set.
When you click Back in the bottom right of the screen, the measurement screen appears.

For more information about the setting details, see the Operation Guide instruction manual as they are the same as the settings of the device.

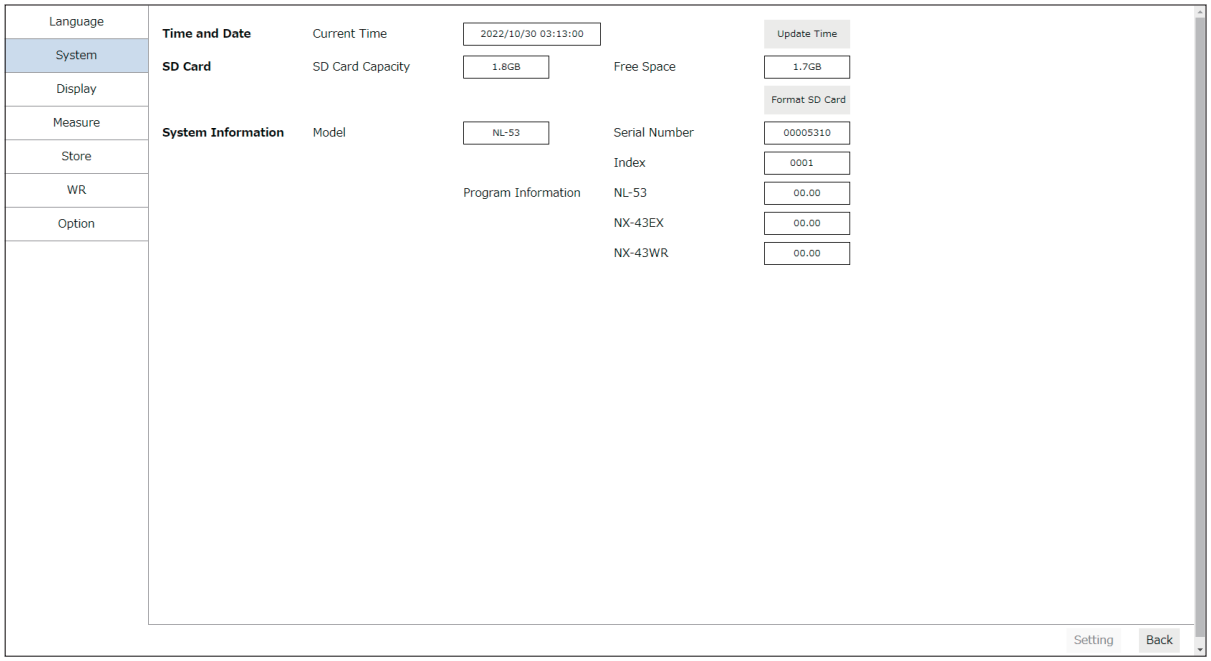
Important

- Do not click the back button on the browser. The network will disconnect.
  To go back, click [Back] in the bottom right of the application.

• Language

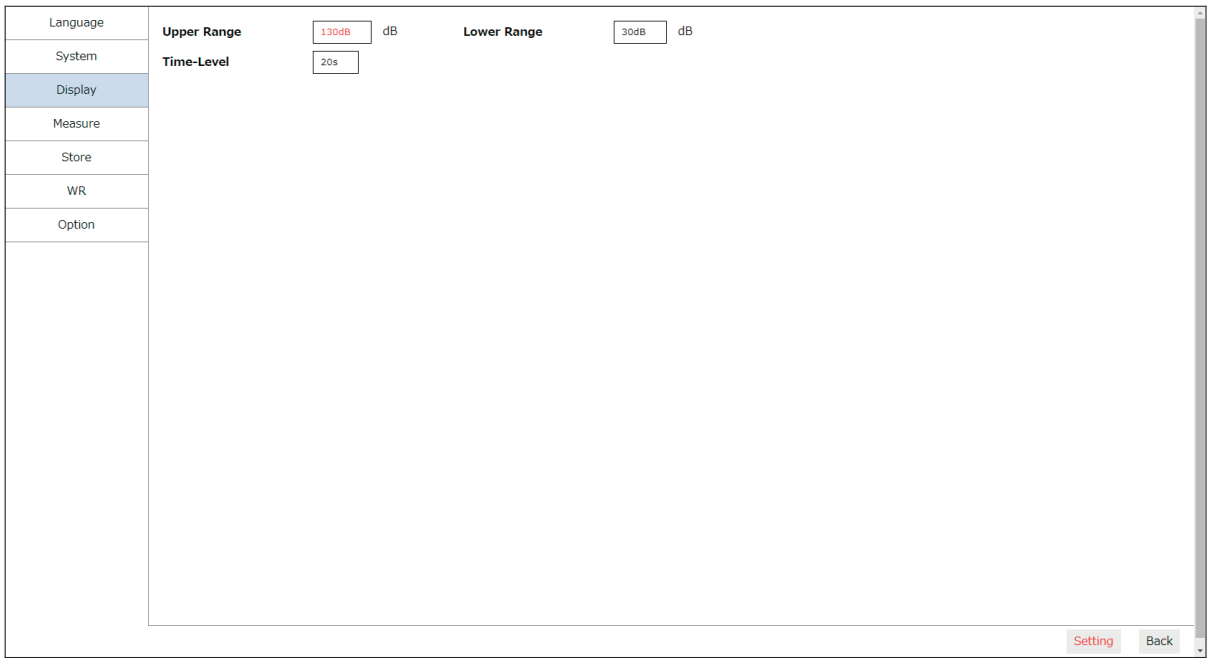
• System

Click [Update Time] to sync the sound level meter time with the time on the linked computer.
Clicking [Update Time] does not cause any reaction on the screen, but the time is updated.

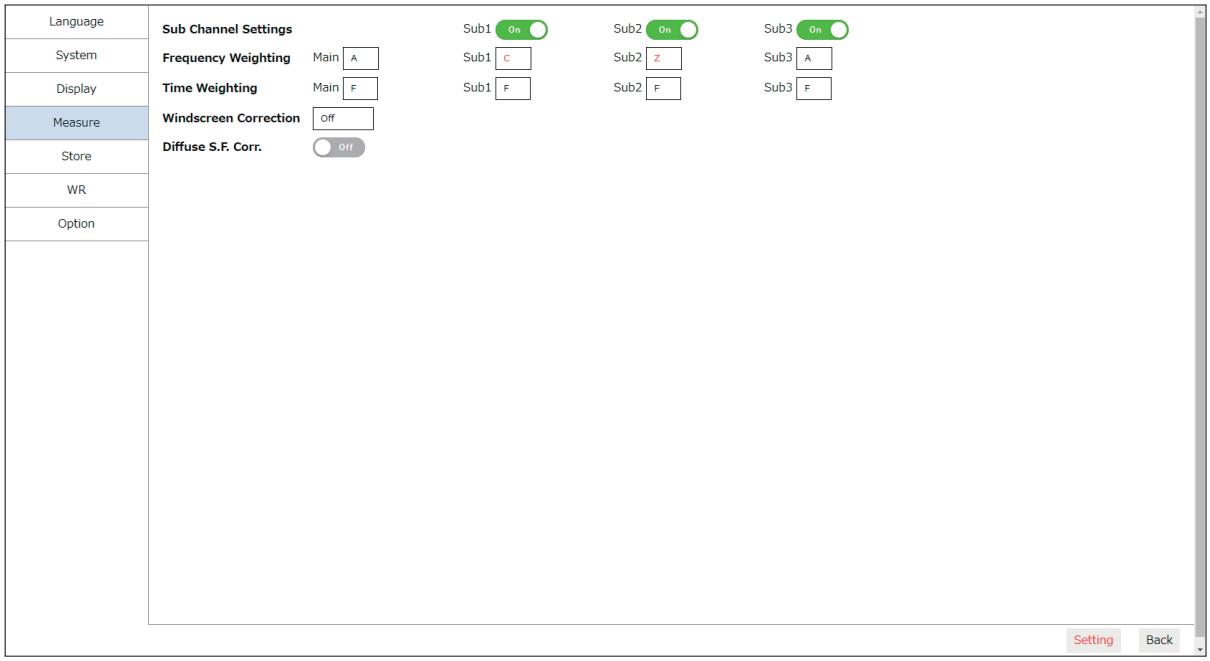


• Display

Decrease the [Upper Range] setting to make the sound louder.
Increase the [Upper Range] setting to make the sound quieter.

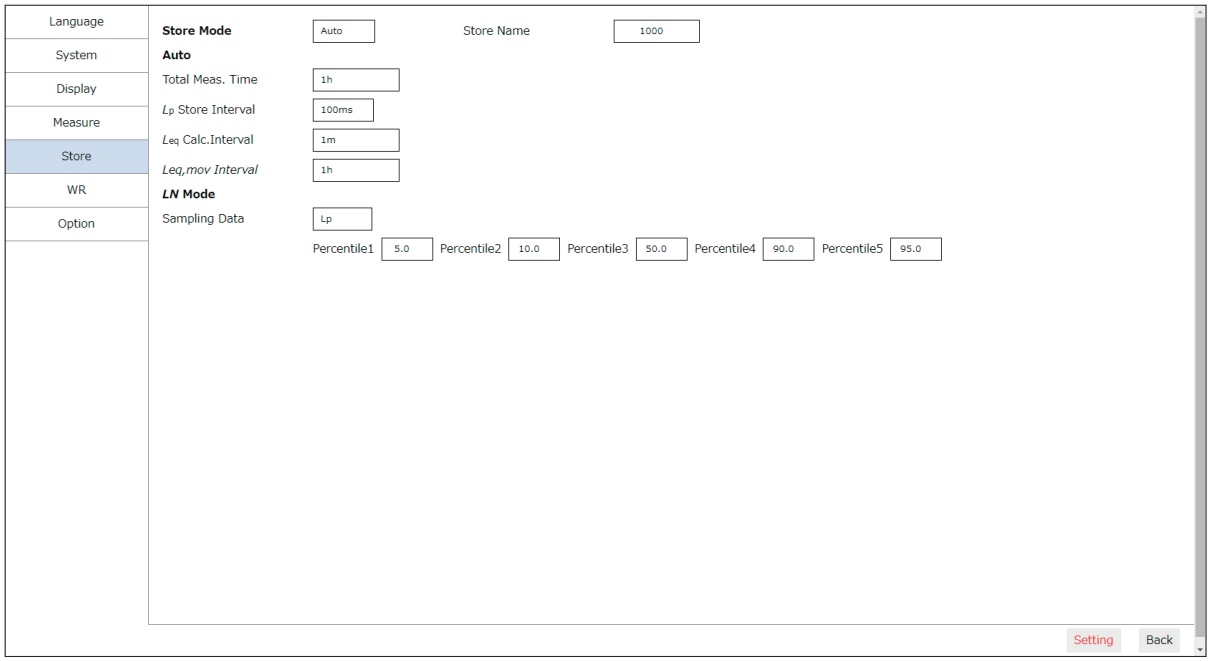


• Measure



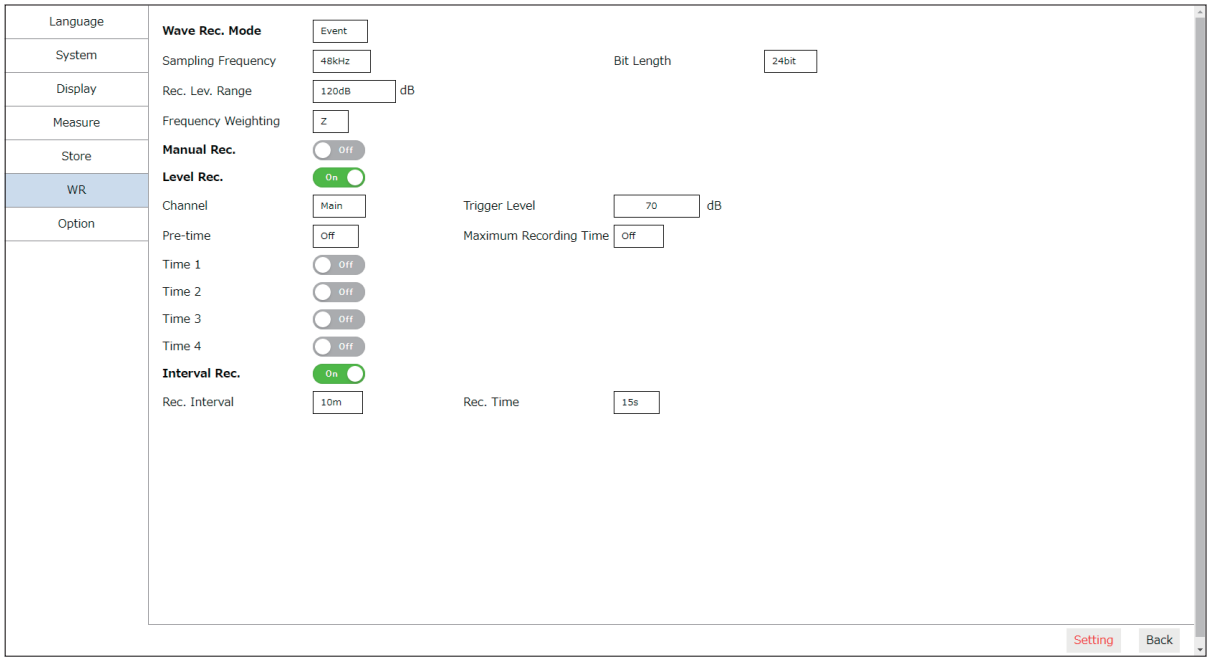
• Store

Store mode can only be set to Manual or Auto. Timer Auto cannot be set.



• WR (Waveform recording) (can be set only when NX-43WR is installed)

If the NX-43WR is not installed and the recording function is set to anything other than [OFF], an error will be displayed.



• Option

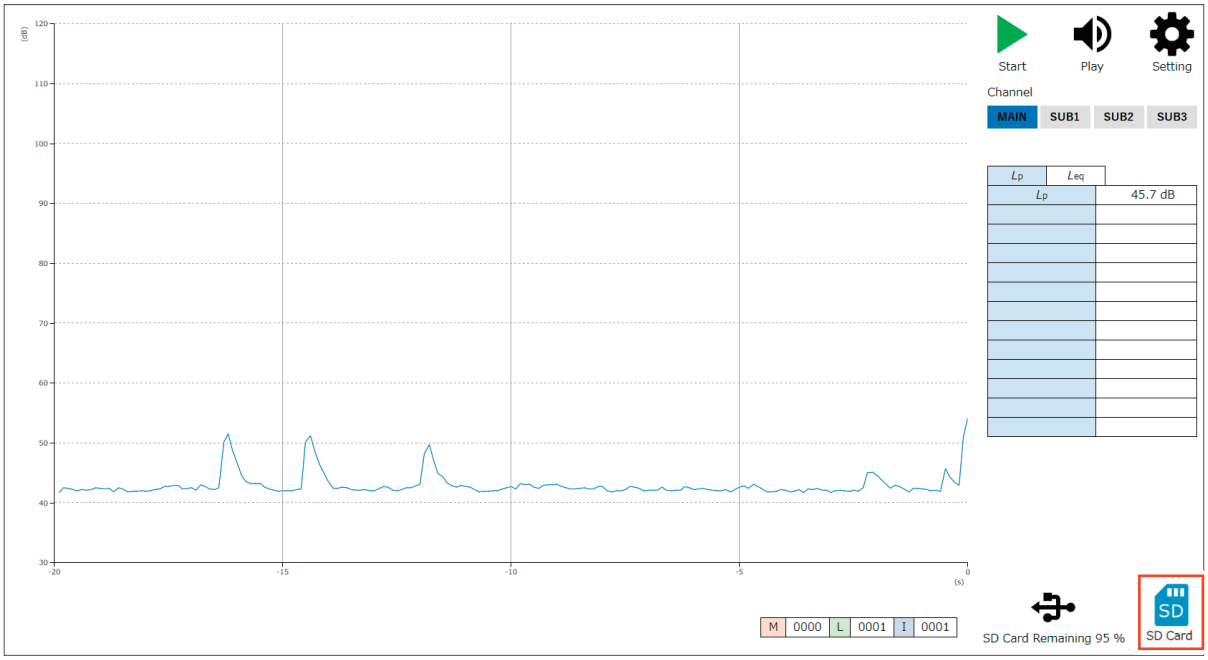
Displays the model and name of the connected sound level meter.
If NX-43RT is installed in the sound level meter, it will be displayed and you can switch the function by clicking it (NX-43RT will be supported soon).

4.3.2 Data download

Data saved in the SD card of the device can be downloaded to a computer.

1 Click SD Card on the measurement screen.

A list of the data stored on the SD card is displayed.



2 Mark the data to be downloaded with ☑, and then click Download.

Data starts to be downloaded onto the computer. File operations can be performed for one file only. It is not possible to mark a folder or multiple files with ☑.
Mark the data to be deleted with ☑, and then click Delete.

5 Commands

5.1 Command types and formats

Note

- You should wait for a “$” response after sending a communication command before sending another. It is recommended to wait for at least one second.

There are two types of commands: setting commands and request commands.

Settings command

This is a command for setting/changing the status of the device or various setting conditions.
There may or may not be responses from the device.
If there is a response, after executing the processing of settings, a response will come back.

- **Format**

Command = “$” + “Command name” + “,” + “Parameter” + [CR] + [LF]

Note

- The part enclosed in “ ” (quotation marks) represents the character string. The “ ” (quotation marks) are not actually sent or received.

The fundamental components of setting commands are the command name and parameter.
The “$” at the beginning of the command represents the command’s processing status and appears automatically. It does not appear when the command is being processed, and commands cannot be entered.
The “,” (comma) to divide the command name and parameter and the [CR] + [LF] (carriage return + line feed) to indicate the end of the setting command are required.

- **Prohibited items**
  - Omitting the spaces included in the command name
  - Entering two or more consecutive spaces in the command name
  - Omitting the “,” (comma) after the command name
  - Using double-byte characters

- **Acceptable items**
  - Using lowercase characters instead of uppercase characters
  - Using uppercase characters instead of lowercase characters

- **Examples of commands**

LCD␣Auto␣Off, Short [CR] [LF]	✓	You can omit the space after the ",".
lcd␣auto␣off,␣short␣[CR] [LF]	✓	You can make all the characters lowercase if you want to.
LCDAuto␣␣Off,␣Short [CR] [LF]	×	The command name must not include spaces.
LCD␣Auto␣Off␣Short [CR] [LF]	×	There is no "," after the command name.

* The symbol "␣" means a space.

Request command

Request commands request the status and various settings of the device or request measurement data such as display data and store data.
The device responds with data.

- **Format**

Command = "Command name" + "?" + [CR] + [LF]

Request commands have a "?" added after the command name. [CR] + [LF] (carriage return + line feed) to indicate the end of the setting command are required.

- **Prohibited items**
  - Omitting the spaces included in the command name
  - Entering two or more consecutive spaces in the command name

- **Acceptable items**
  - Using lowercase characters instead of uppercase characters
  - Using uppercase characters instead of lowercase characters

5.2 Communication echo

When communication echo is turned on, the sent command string is sent back from where it was sent, allowing you to check whether the command has been entered correctly.
Use the Echo command to check whether communication echo is ON/OFF or the current settings.

5.3 Result code

This is the response data that indicates the command execution result. The result code is structured as follows:

Result code = “R+” + “4 digits”

The meanings of the 4-digit numbers after the prefix “R+” are as follows.

No.	Description
0000	Completed successfully The command was executed (setting/request) successfully.
0001	Command error The specified command could not be recognized.
0002	Parameter error The number and format of parameters allowed for the specified command do not match.
0003	Specification error Settings were made in relation to a command that can only request, or a request made in relation to a command that can only be set.
0004	Status error The device is not in a state where the command can be executed (set/requested).

5.4 Transmission code

The codes (control codes) used for communication with the device are shown below.

Code name	Hexadecimal notation	Meaning
[CR]	$0D_H$	First terminator character
[LF]	$0A_H$	Second terminator character
[SUB]	$1A_H$	Stop request

5.5 Control value

Guaranteed value

Case	Control value	Remarks
The time until the device gives a response	Within 3 s	For processing reasons, the device responds with result code 0004 (status error)
Time between sent characters	Within 100 ms	–
The time from when the device sends out data until it enters an idle state	Within 200 ms	You should wait for a “$” response after sending a communication command before sending another. It is recommended to wait for at least one second.

Control value

Case	Control value	Remarks
Wait for the completion of block generation after receiving <STX>	No restriction	–
Time-out between receiving characters	No restriction	–

5.6 List of commands

S: Setting command (for making the unit settings)

R: Request command (for obtaining information on the unit status and measurement results)

	Commands	Function	See page
Communication	Echo	Communication echo (S/R)	39
System	System Version	Version information (R)	39
	Type	Type information (R)	39
	Serial Number	Serial number (R)	39
	Clock	Current time (S/R)	40
	Language	Display language (S/R)	40
	Index Number	Index (S/R)	40
	Key Lock	Key lock (S/R)	41
	Backlight	Backlight status (S/R)	41
	Backlight Auto Off	Backlight auto off (S/R)	41
	LCD	LCD status (S/R)	41
	LCD Auto Off	LCD auto off (S/R)	42
	Backlight Brightness	Backlight brightness (S/R)	42
	Battery Type	Battery type (S/R)	42
	Battery Level	Battery level (S/R)	43
	SD Card Total Size	Total SD card capacity (R)	43
	SD Card Free Size	SD card free space (R)	43
	SD Card Percentage	SD card free space ratio (R)	43
Display	Output Level Range Upper	Bar graph upper range (S/R)	44
	Output Level Range Lower	Bar graph lower range (S/R)	44
	Display Leq	L_{eq} display (S/R)	44
	Display LE	L_E display (S/R)	44
	Display Lpeak	L_{peak} display (S/R)	45
	Display Lmax	L_{max} display (S/R)	45
	Display Lmin	L_{min} display (S/R)	45
	Display LN1	L_5 display (S/R)	45
	Display LN2	L_{10} display (S/R)	46
	Display LN3	L_{50} display (S/R)	46
	Display LN4	L_{90} display (S/R)	46
	Display LN5	L_{95} display (S/R)	46
	Display LIeq	L_{Ieq} display (S/R)	47
	Display Ltm5	L_{tm5} display (S/R)	47
	Display Leqmov	$L_{eq,mov}$ display (S/R)	47
	Time Level Time Scale	Time-Level time scale (S/R)	47
Display (NX-43RT)	Display Calculate Type	Display calculate type (S/R)	48
Measure	Display Sub Channel 1 Display Sub Channel 2 Display Sub Channel 3	Sub channels (S/R)	49

	Commands	Function	See page
Measure (NX-43RT)	Octave Mode	Analysis mode (S/R)	49
	Additional Band	Sub band (S/R)	49
	Display Partial Over All	Partial overall (POA) (S/R)	50
	Upper Limit Frequency	Upper frequency of POA (S/R)	50
	Upper Limit Frequency Offset	Upper frequency offset of POA (S/R)	51
	Lower Limit Frequency	Lower frequency of POA (S/R)	51
	Lower Limit Frequency Offset	Lower frequency offset of POA (S/R)	52
	Lmax Type	L_{max}/L_{min} type (S/R)	52
	Lmax Type Channel	L_{max}/L_{min} channel (S/R)	52
Measure (NX-43EX)	Frequency Weighting Frequency Weighting (Main)	Main frequency weighting (S/R)	53
	Frequency Weighting (Sub1) Frequency Weighting (Sub2) Frequency Weighting (Sub3)	Sub frequency weighting (S/R)	53
Measure (NX-43RT)	Frequency Weighting (Band)	Frequency weighting band (S/R)	53
Measure	Time Weighting Time Weighting (Main)	Main time weighting (S/R)	54
	Time Weighting (Sub1) Time Weighting (Sub2) Time Weighting (Sub3)	Sub time weighting (S/R)	54
Measure (NX-43RT)	Time Weighting (Band)	Time weighting band (S/R)	55
	Time Weighting (Band2)	Time weighting sub band (S/R)	55
Measure	Windscreen Correction	Windscreen correction (S/R)	55
	Diffuse Sound Field Correction	Diffuse sound field correction (S/R)	56
Measure (NX-43RT)	Ldiff1 Ldiff2	Measure differential (S/R)	56
	Ldiff1 Channel1 Ldiff1 Channel2 Ldiff2 Channel1 Ldiff2 Channel2	Measure differential, channel (S/R)	56
	Ldiff1 Calculation1 Ldiff1 Calculation2 Ldiff2 Calculation1 Ldiff2 Calculation2	Measure differential, calculation (S/R)	57
Store	Store Mode	Store mode (S/R)	58
	Store Name	Storage name (S/R)	58
	Manual Address	Manual storage address (S/R)	58
	Measure	Measure (S/R)	58
	Pause	Pause (S/R)	59
	Manual Store	Manual storage (S)	59
	Overwrite	Storage overwriting check (S/R)	59
	Measurement Time Preset Manual	Manual storage measurement time (S/R)	60
	Measurement Time Manual (Num)	Manual storage measurement time (user setting: time) (S/R)	60
	Measurement Time Manual (Unit)	Manual storage measurement time (user setting: unit) (S/R)	60

	Commands	Function	See page
Store (NX-43EX)	Measurement Time Preset Auto	Auto storage total measurement time (S/R)	61
	Measurement Time Auto (Num)	Auto storage total measurement time (user setting: time) (S/R)	61
	Measurement Time Auto (Unit)	Auto storage total measurement time (user setting: unit) (S/R)	61
	Lp Store Interval	L_p store interval (S/R)	62
	Leq Calculation Interval Preset	L_{eq} calculation interval (S/R)	62
	Leq Calculation Interval (Num)	L_{eq} calculation interval (user setting: time) (S/R)	62
	Leq Calculation Interval (Unit)	L_{eq} calculation interval (user setting: unit) (S/R)	63
Store	Delay Time	Delay measurement (S/R)	63
	Back Erase	Back erase (S/R)	63
	Timer Auto Start Time	Timer auto start time (S/R)	64
	Timer Auto Stop Time	Timer auto stop time (S/R)	64
Store (NX-43EX)	Timer Auto Interval	Timer auto measurement interval (S/R)	65
	Sleep Mode	Sleep mode (S/R)	65
	Trigger Mode	Trigger mode (S/R)	65
	Level Trigger Channel	Level trigger channel (trigger mode) (S/R)	66
Store (NX-43RT)	Level Trigger Band Frequency	Level trigger band frequency (trigger mode) (S/R)	66
	Level Trigger Band Offset	Level trigger band frequency offset (trigger mode) (S/R)	67
Store (NX-43EX)	Level Trigger Level	Trigger level (trigger mode) (S/R)	67
	Moving Leq Interval Preset	Moving L_{eq} interval (S/R)	67
	Moving Leq Interval (Num)	Moving L_{eq} interval (user setting: time) (S/R)	68
	Moving Leq Interval (Unit)	Moving L_{eq} interval (user setting: unit) (S/R)	68
	TRM	L_N mode, sampling data (S/R)	68
	Percentile 1 Percentile 2 Percentile 3 Percentile 4 Percentile 5	L_N mode, percentile (S/R)	69
Store (NX-43RT)	Lp Mode	L_p type (S/R)	69
Waveform recording (NX-43WR)	Wave Rec Mode	Recording function (S/R)	70
	Wave Sampling Frequency	Sampling frequency (S/R)	70
	Wave Bit Length	Bit length (S/R)	70
	Frequency Weighting (Wave)	Frequency weighting (waveform recording) (S/R)	71
	Wave Rec Range Upper	Recording level range (S/R)	71
	Wave Rec State	Recording status (S/R)	71
	Wave Splitting Interval	File splitting interval (S/R)	72
	Wave Manual Rec	Manual recording (S/R)	72
	Wave Manual Pre-time	Manual recording pre-time (S/R)	72
	Wave Level Rec	Level recording (S/R)	73
	Wave Level Trigger Channel	Trigger channels (level recording) (S/R)	73
Waveform recording (NX-43RT)	Wave Level Trigger Band Frequency	Trigger band frequency (level recording) (S/R)	73
	Wave Level Trigger Band Offset	Trigger band frequency offset (level recording) (S/R)	74

	Commands	Function	See page
Waveform recording (NX-43WR)	Wave Level Trigger Level	Start level (level recording) (S/R)	74
	Wave Level Pre-time	Pre-time (level recording) (S/R)	74
	Wave Level Maximum Recording Time	Maximum recording time (S/R)	75
	Wave Level Reference Time Interval 1 Wave Level Reference Time Interval 2 Wave Level Reference Time Interval 3 Wave Level Reference Time Interval 4	Threshold per time zone (S/R)	75
	Wave Level Reference Time 1 Wave Level Reference Time 2 Wave Level Reference Time 3 Wave Level Reference Time 4	Threshold per time zone time (S/R)	75
	Wave Level Reference Time 1 Level Wave Level Reference Time 2 Level Wave Level Reference Time 3 Level Wave Level Reference Time 4 Level	Threshold per time zone level (S/R)	76
	Wave Interval Rec	Interval recording (S/R)	76
	Wave Interval Rec Interval	Interval recording_Recording interval (S/R)	76
	Wave Interval Rec Time	Interval recording_Recording time (S/R)	77
I/O	AC OUT	AC output (S/R)	78
I/O (NX-43RT)	AC Out Band Frequency	AC output band frequency (S/R)	78
	AC Out Band Offset	AC output band frequency offset (S/R)	79
I/O	DC OUT	DC output (S/R)	79
I/O (NX-43RT)	DC Out Band Frequency	DC output band frequency (S/R)	80
	DC Out Band Offset	DC output band frequency offset (S/R)	80
I/O	Output Range Upper	Electrical output full scale (S/R)	81
	Reference Signal Output	Reference signal output (S/R)	81
	IO Func	IO port (S/R)	81
	Baud Rate	RS-232C communication speed (S/R)	82
	Comparator Channel	Comparator channel (S/R)	82
I/O (NX-43RT)	Comparator Band Frequency	Comparator band frequency (S/R)	82
	Comparator Band Offset	Comparator band frequency offset (S/R)	83
I/O	Comparator Level	Comparator level (S/R)	83
	USB Class	USB communication (S/R)	83
I/O (NX-43EX)	Ethernet	LAN function (S/R)	84
	Ethernet DHCP	IP address automatic setting (S/R)	84
	Ethernet IP	IP address (S/R)	84
	Ethernet Subnet	Subnet mask (S/R)	84
	Ethernet Gateway	Default gateway (S/R)	85
	Web	Web app (S/R)	85
	FTP	File transfer (FTP) (S/R)	85
	TCP	Communication control (TCP) (S/R)	86
Data output	DOD	Output displayed value (R)	88
Data output (NX-43RT)	DOD	Output displayed value (R)	89
Data output (NX-43EX)	DRD	Continuous output (R)	90

	Commands	Function	See page
Data output (NX-43RT)	DRD	Continuous output (R)	91
Data output (NX-43EX)	DRD?status	Continuous output (attaching status information) (R)	92
Data output (NX-43RT)	DRD?status	Continuous output (attaching status information) (R)	93
Data output	DLC	Final calculation result output (R)	94
Data output (NX-43RT)	DLC	Final calculation result output (R)	95

5.7 Command description

Communication

Echo	
Function	Communication echo
Description	Sets ON/OFF of communication echo
Setting command	Echo, p1
Parameter	p1=“Off” p1=“On”
Request command	Echo?
Response data	d1
Return value	Same as the settings parameter

System

System Version	
Function	Version information
Description	Acquires version information
Request command	System␣Version?
Response data	d1=“xx.xx.xxxx” (x represents numbers 0 to 9)
Remarks	There is no setting command.

Type	
Function	Type information
Description	Acquires the type information
Request command	Type?
Response data	“NL-43” (when NL-43 is used) “NL-53” (when NL-53 is used)
Remarks	There is no setting command.

Serial Number	
Function	Serial number
Description	Acquires the serial number
Request command	Serial␣Number?
Response data	d1=“xxxxxxxx” (xxxxxxxx represents numbers 00000000 to 99999999)
Return value	p1

Clock	
Function	Current time
Description	Sets the current time
Setting command	Clock, p1/p2/p3␣p4:p5:p6
Parameter	p1=2023–2079 (year) p2=1–12 (month) p3=1–31 (day) p4=0–23 (hour) p5=0–59 (minute) p6=0–59 (second)
Request command	Clock?
Response data	d1/d2/d3␣d4:d5:d6
Return value	Same as the settings parameter

Language	
Function	Display language
Description	Sets the display language
Setting command	Language, p1
Parameter	p1=“Japanese” p1=“English” p1=“Germany” p1=“Spanish” p1=“French” p1=“Simplified Chinese” p1=“Korean”
Request command	Language?
Response data	d1
Return value	Same as the settings parameter

Index Number	
Function	Index
Description	Sets the index number
Setting command	Index␣Number, p1
Parameter	p1=0000–9999
Request command	Index␣Number?
Response data	d1
Return value	Same as the settings parameter

Key Lock	
Function	Key lock
Description	Sets ON/OFF of the key lock
Setting command	Key␣Lock, p1
Parameter	p1=“Off” p1=“On”
Request command	Key␣Lock?
Response data	d1
Return value	Same as the settings parameter

Backlight	
Function	Backlight status
Description	Sets ON/OFF of the backlight lighting
Setting command	Backlight, p1
Parameter	p1=“Off” p1=“On”
Request command	Backlight?
Response data	d1
Return value	Same as the settings parameter

Backlight Auto Off	
Function	Backlight auto off
Description	Sets the backlight auto off time
Setting command	Backlight␣Auto␣Off, p1
Parameter	p1=“Cont” p1=“30s” p1=“3m”
Request command	Backlight␣Auto␣Off?
Response data	d1
Return value	Same as the settings parameter

LCD	
Function	LCD status
Description	Sets ON/OFF of the LCD lighting
Setting command	LCD, p1
Parameter	p1=“Off” p1=“On”
Request command	LCD?
Response data	d1
Return value	Same as the settings parameter

LCD Auto Off	
Function	LCD auto off
Description	Sets the LCD auto off time
Setting command	LCD␣Auto␣Off, p1
Parameter	p1="30s" p1="1m" p1="2m" p1="5m" p1="Cont"
Request command	LCD␣Auto␣Off?
Response data	d1
Return value	Same as the settings parameter

Backlight Brightness	
Function	Backlight brightness
Description	Sets the backlight brightness
Setting command	Backlight␣Brightness, p1
Parameter	p1="1" p1="2" p1="3" p1="4"
Request command	Backlight␣Brightness?
Response data	d1
Return value	Same as the settings parameter

Battery Type	
Function	Battery type
Description	Sets the battery type
Setting command	Battery␣Type, p1
Parameter	p1="Alkaline" (alkaline battery) p1="Nickel" (Ni-MH rechargeable battery)
Request command	Battery␣Type?
Response data	d1
Return value	Same as the settings parameter

Battery Level	
Function	Battery level
Description	Acquires the battery level
Setting command	Battery␣Level, p1
Parameter	p1=“Full” p1=“Mid” p1=“Low” p1=“Danger” p1=“Empty”
Request command	Battery␣Level?
Response data	d1
Return value	Same as the settings parameter
Remarks	F  (Full) M  (Mid) L  (Low) D  (Danger) E  Flashing (Empty)

SD Card Total Size	
Function	Total SD card capacity
Description	Acquires the total SD card capacity
Request command	SD␣Card␣Total␣Size?
Response data	d1=0 (MB) and upward
Remarks	There is no setting command.

SD Card Free Size	
Function	SD card free space
Description	Acquires the SD card free space
Request command	SD␣Card␣Free␣Size?
Response data	d1=0 (MB) and upward
Remarks	There is no setting command.

SD Card Percentage	
Function	SD card free space ratio
Description	Acquires the SD card free space percentage
Request command	SD␣Card␣Percentage?
Response data	d1=0–100
Remarks	There is no setting command.

Display

Output Level Range Upper	
Function	Bar graph upper range
Description	Sets the bar graph's upper range value
Setting command	Output␣Level␣Range␣Upper, p1
Parameter	p1=70–130 (the setting value increase in 10 dB increments)
Request command	Output␣Level␣Range␣Upper?
Response data	d1
Return value	Same as the settings parameter

Output Level Range Lower	
Function	Bar graph lower range
Description	Sets the bar graph's lower range value. The lower limit value cannot be the same or more than the output level range upper value.
Setting command	Output␣Level␣Range␣Lower, p1
Parameter	p1=20–60 (the setting value increase in 10dB increments)
Request command	Output␣Level␣Range␣Lower?
Response data	d1
Return value	Same as the settings parameter

Display Leq	
Function	L_{eq} display
Description	Sets ON/OFF of the L_{eq} display
Setting command	Display␣Leq, p1
Parameter	p1="Off" p1="On"
Request command	Display␣Leq?
Response data	d1
Return value	Same as the settings parameter

Display LE	
Function	L_E display
Description	Sets ON/OFF of the L_E display
Setting command	Display␣LE, p1
Parameter	p1="Off" p1="On"
Request command	Display␣LE?
Response data	d1
Return value	Same as the settings parameter

Display Lpeak	
Function	L_{peak} display
Description	Sets ON/OFF of the L_{peak} display
Setting command	Display␣Lpeak, p1
Parameter	p1="Off" p1="On"
Request command	Display␣Lpeak?
Response data	d1
Return value	Same as the settings parameter

Display Lmax	
Function	L_{max} display
Description	Sets ON/OFF of the L_{max} display
Setting command	Display␣Lmax, p1
Parameter	p1="Off" p1="On"
Request command	Display␣Lmax?
Response data	d1
Return value	Same as the settings parameter

Display Lmin	
Function	L_{min} display
Description	Sets ON/OFF of the L_{min} display
Setting command	Display␣Lmin, p1
Parameter	p1="Off" p1="On"
Request command	Display␣Lmin?
Response data	d1
Return value	Same as the settings parameter

Display LN1	
Function	L_5 display
Description	Sets ON/OFF of the L_5 display
Setting command	Display␣LN1, p1
Parameter	p1="Off" p1="On"
Request command	Display␣LN1?
Response data	d1
Return value	Same as the settings parameter

Display LN2	
Function	L_{10} display
Description	Sets ON/OFF of the L_{10} display
Setting command	Display␣LN2, p1
Parameter	p1="Off" p1="On"
Request command	Display␣LN2?
Response data	d1
Return value	Same as the settings parameter

Display LN3	
Function	L_{50} display
Description	Sets ON/OFF of the L_{50} display
Setting command	Display␣LN3, p1
Parameter	p1="Off" p1="On"
Request command	Display␣LN3?
Response data	d1
Return value	Same as the settings parameter

Display LN4	
Function	L_{90} display
Description	Sets ON/OFF of the L_{90} display
Setting command	Display␣LN4, p1
Parameter	p1="Off" p1="On"
Request command	Display␣LN4?
Response data	d1
Return value	Same as the settings parameter

Display LN5	
Function	L_{95} display
Description	Sets ON/OFF of the L_{95} display
Setting command	Display␣LN5, p1
Parameter	p1="Off" p1="On"
Request command	Display␣LN5?
Response data	d1
Return value	Same as the settings parameter

Display Lleq	
Function	L_{leq} display
Description	Sets ON/OFF of the L_{leq} display
Setting command	Display␣Lleq, p1
Parameter	p1="Off" p1="On"
Request command	Display␣Lleq?
Response data	d1
Return value	Same as the settings parameter

Display Ltm5	
Function	L_{tm5} display
Description	Sets ON/OFF of the L_{tm5} display
Setting command	Display␣Ltm5, p1
Parameter	p1="Off" p1="On"
Request command	Display␣Ltm5?
Response data	d1
Return value	Same as the settings parameter

Display Leqmov	
Function	$L_{eq,mov}$ display
Description	Sets ON/OFF of the $L_{eq,mov}$ display
Setting command	Display␣Leqmov, p1
Parameter	p1="Off" p1="On"
Request command	Display␣Leqmov?
Response data	d1
Return value	Same as the settings parameter

Time Level Time Scale	
Function	Time-Level time scale
Description	Sets the Time-Level time scale
Setting command	Time␣Level␣Time␣Scale, p1
Parameter	p1="Off" p1="20s" p1="1m" p1="2m"
Request command	Time␣Level␣Time␣Scale?
Response data	d1
Return value	Same as the settings parameter

Display Calculate Type (only when the optional program NX-43RT is installed)	
Function	Display calculate type
Description	Sets the calculation items to be displayed on the screen
Setting command	Display␣Calculate␣Type, p1
Parameter	p1=“Lp” p1=“Leq” p1=“LE” p1=“Lmax” p1=“Lmin” p1=“LN1” p1=“LN2” p1=“LN3” p1=“LN4” p1=“LN5” p1=“Leqmov” p1=“Ly”
Request command	Display␣Calculate␣Type?
Response data	d1
Return value	Same as the settings parameter

Measure

Display Sub Channel 1 **Display Sub Channel 2** **Display Sub Channel 3**	
Function	Sub channels
Description	Sets whether the sub channels are ON/OFF
Setting command*	Display␣Sub␣Channel␣1, p1
Parameter	p1="Off" p1="On"
Request command*	Display␣Sub␣Channel␣1?
Response data	d1
Return value	Same as the settings parameter

* Display Sub Channel 1 is used as an example.

Octave Mode (only when the optional program NX-43RT is installed)	
Function	Analysis mode
Description	Sets the analysis mode
Setting command	Octave␣Mode, p1
Parameter	p1="Octave" p1="1/3␣Octave"
Request command	Octave␣Mode?
Response data	d1
Return value	Same as the settings parameter

Additional Band (only when the optional program NX-43RT is installed)	
Function	Sub band
Description	Sets ON/OFF for the sub band of octave analysis
Setting command	Additional␣Band, p1
Parameter	p1="Off" p1="On"
Request command	Additional␣Band?
Response data	d1
Return value	Same as the settings parameter

Display Partial Over All (only when the optional program NX-43RT is installed)	
Function	Partial overall (POA)
Description	Sets ON/OFF of the partial overall (POA) calculation
Setting command	Display␣Partial␣Over␣All, p1
Parameter	p1="Off" p1="On"
Request command	Display␣Partial␣Over␣All?
Response data	d1
Return value	Same as the settings parameter

Upper Limit Frequency (only when the optional program NX-43RT is installed)	
Function	Upper frequency of POA
Description	Sets the upper frequency of POA
Setting command	Upper␣Limit␣Frequency, p1
Parameter	p1="16Hz" p1="31Hz" p1="63Hz" p1="125Hz" p1="250Hz" p1="500Hz" p1="1kHz" p1="2kHz" p1="4kHz" p1="8kHz" p1="16kHz"
Request command	Upper␣Limit␣Frequency?
Response data	d1
Return value	Same as the settings parameter

Upper Limit Frequency Offset (only when the optional program NX-43RT is installed)	
Function	Upper frequency offset of POA
Description	Offsets for the upper frequency band for POA Divides the upper frequency band for POA (center frequency of octave band*) for 1/3 octave band analysis into three values (Low, Center, and High) Example: When the upper frequency is set to “1kHz”, “Low” will be 800Hz, “Center” 1kHz, and “High” 1.25kHz. * Refer to “IEC 61260-1 (JIS C 1513-1) center frequency” in the “NX-43RT instruction manual”
Setting command	Upper␣Limit␣Frequency␣Offset, p1
Parameter	p1=“Low” p1=“Center” p1=“High”
Request command	Upper␣Limit␣Frequency␣Offset?
Response data	d1
Return value	Same as the settings parameter

Lower Limit Frequency (only when the optional program NX-43RT is installed)	
Function	Lower frequency of POA
Description	Sets the lower frequency of POA
Setting command	Lower␣Limit␣Frequency, p1
Parameter	p1=“16Hz” p1=“31Hz” p1=“63Hz” p1=“125Hz” p1=“250Hz” p1=“500Hz” p1=“1kHz” p1=“2kHz” p1=“4kHz” p1=“8kHz” p1=“16kHz”
Request command	Lower␣Limit␣Frequency?
Response data	d1
Return value	Same as the settings parameter

Lower Limit Frequency Offset (only when the optional program NX-43RT is installed)	
Function	Lower frequency offset of POA
Description	Offsets for the lower frequency band of POA Divides the lower frequency band of POA (center frequency of octave band*) for 1/3 octave band analysis into three values (Low, Center, and High) Example: When the lower frequency is set to “1kHz”, “Low” will be 800Hz, “Center” 1kHz, and “High” 1.25kHz. * Refer to “IEC 61260-1 (JIS C 1513-1) center frequency” in the “NX-43RT instruction manual”
Setting command	Lower␣Limit␣Frequency␣Offset, p1
Parameter	p1=“Low” p1=“Center” p1=“High”
Request command	Lower␣Limit␣Frequency␣Offset?
Response data	d1
Return value	Same as the settings parameter

Lmax Type (only when the optional program NX-43RT is installed)	
Function	L_{max}/L_{min} type
Description	Sets the L_{max}/L_{min} from Band max / AP max
Setting command	Lmax␣Type, p1
Parameter	p1=“AP” p1=“Band”
Request command	Lmax␣Type?
Response data	d1
Return value	Same as the settings parameter

Lmax Type Channel (only when the optional program NX-43RT is installed)	
Function	L_{max}/L_{min} channel
Description	Sets the L_{max}/L_{min} from Band max / AP max
Setting command	Lmax␣Type␣Channel, p1
Parameter	p1=“Main” p1=“Sub1” p1=“Sub2” p1=“Sub3”
Request command	Lmax␣Type␣Channel?
Response data	d1
Return value	Same as the settings parameter

Frequency Weighting **Frequency Weighting (Main)**	
Function	Main frequency weighting
Description	Sets the frequency weighting of the main channel
Setting command	Frequency␣Weighting, p1
Parameter	p1=“A” p1=“C” p1=“Z”
Request command	Frequency␣Weighting?
Response data	d1
Return value	Same as the settings parameter

Frequency Weighting (Sub1) **Frequency Weighting (Sub2)** **Frequency Weighting (Sub3)**	
Function	Sub frequency weighting
Description	Sets the frequency weighting of the sub channels
Setting command*	Frequency␣Weighting␣(Sub1), p1
Parameter	p1=“A” p1=“C” p1=“Z”
Request command*	Frequency␣Weighting␣(Sub1)?
Response data	d1
Return value	Same as the settings parameter

* Frequency Weighting (Sub1) is used as an example.

Frequency Weighting (Band) (only when the optional program NX-43RT is installed)	
Function	Frequency weighting band
Description	Sets the frequency weighting band
Setting command	Frequency␣Weighting␣(Band), p1
Parameter	p1=“A” p1=“C” p1=“Z”
Request command	Frequency␣Weighting␣(Band)?
Response data	d1
Return value	Same as the settings parameter

Time Weighting Time Weighting (Main)	
Function	Main time weighting
Description	Sets the time weighting of the main channel
Setting command	Time␣Weighting, p1
Parameter	p1=“F” p1=“S” p1=“I” (when NX-43EX is installed)
Request command	Time␣Weighting?
Response data	d1
Return value	Same as the settings parameter

Time Weighting (Sub1) Time Weighting (Sub2) Time Weighting (Sub3)	
Function	Sub time weighting
Description	Sets the time weighting of the sub channels
Setting command*	Time␣Weighting␣(Sub1), p1
Parameter	p1=“F” p1=“S” p1=“I” (when NX-43EX is installed)
Request command*	Time␣Weighting␣(Sub1)?
Response data	d1
Return value	Same as the settings parameter

* Time Weighting (Sub1) is used as an example.

Time Weighting (Band) (only when the optional program NX-43RT is installed)	
Function	Time weighting band
Description	Sets the time weighting band
Setting command	Time␣Weighting␣(Band), p1
Parameter	p1=“F” p1=“S”
Request command	Time␣Weighting␣(Band)?
Response data	d1
Return value	Same as the settings parameter

Time Weighting (Band2) (only when the optional program NX-43RT is installed)	
Function	Time weighting sub band
Description	Sets the time weighting sub band
Setting command	Time␣Weighting␣(Band2), p1
Parameter	p1=“F” p1=“S”
Request command	Time␣Weighting␣(Band2)?
Response data	d1
Return value	Same as the settings parameter

Windscreen Correction	
Function	Windscreen correction
Description	Sets the windscreen correction
Setting command	Windscreen␣Correction, p1
Parameter	p1=“Off” p1=“WS-10” p1=“WS-15” p1=“WS-16”
Request command	Windscreen␣Correction?
Response data	d1
Return value	Same as the settings parameter

Diffuse Sound Field Correction	
Function	Diffuse sound field correction
Description	Sets ON/OFF of the diffuse sound field correction
Setting command	Diffuse␣Sound␣Field␣Correction, p1
Parameter	p1="Off" p1="On"
Request command	Diffuse␣Sound␣Field␣Correction?
Response data	d1
Return value	Same as the settings parameter

Ldiff1 **Ldiff2** (only when the optional program NX-43RT is installed)	
Function	Measure differential
Description	Sets the measure differential 1 to 2
Setting command*	Ldiff1, p1
Parameter	p1="Off" p1="On"
Request command*	Ldiff1?
Response data	d1
Return value	Same as the settings parameter

* Ldiff1 is used as an example.

Ldiff1 Channel1 **Ldiff1 Channel2** **Ldiff2 Channel1** **Ldiff2 Channel2** (only when the optional program NX-43RT is installed)	
Function	Measure differential, channel
Description	Sets the measure differential 1 to 2 of the channel 1 to 2
Setting command*	Ldiff1␣Channel1, p1
Parameter	p1="Main" p1="Sub1" p1="Sub2" p1="Sub3"
Request command*	Ldiff1␣Channel1?
Response data	d1
Return value	Same as the settings parameter

* Ldiff1 Channel1 is used as an example.

Ldiff1 Calculation1 **Ldiff1 Calculation2** **Ldiff2 Calculation1** **Ldiff2 Calculation2** (only when the optional program NX-43RT is installed)	
Function	Measure differential, calculation
Description	Sets the measure differential 1 to 2 of the channel 1 to 2
Setting command*1	Ldiff1␣Calculation1, p1
Parameter	p1=“Leq” p1=“LE” p1=“Lmax” p1=“Lmin” p1=“LN1” p1=“LN2” p1=“LN3” p1=“LN4” p1=“LN5” p1=“Lpeak” p1=“LIeq” (depends on the setting of the Ldiff1 and Ldiff2*2)
Request command*1	Ldiff1␣Calculation1?
Response data	d1
Return value	Same as the settings parameter

*1 Ldiff1 Calculation1 is used as an example.

*2 Can be available when the settings are as follows.

Frequency weighting: A

Time weighting: I

Store

Store Mode	
Function	Store mode
Description	Sets the store mode
Setting command	Store␣Mode, p1
Parameter	p1="Manual" p1="Auto" (when NX-43EX is installed) p1="Timer␣Auto" (when NX-43EX is installed)
Request command	Store␣Mode?
Response data	d1
Return value	Same as the settings parameter

Store Name	
Function	Store name
Description	Sets the store name
Setting command	Store␣Name, p1
Parameter	p1=0000–9999
Request command	Store␣Name?
Response data	d1
Return value	Same as the settings parameter

Manual Address	
Function	Manual storage address
Description	Sets the manual storage address
Setting command	Manual␣Address, p1
Parameter	p1=0001–1000
Request command	Manual␣Address?
Response data	d1
Return value	Same as the settings parameter

Measure	
Function	Measure
Description	Starts/stops measuring
Setting command	Measure, p1
Parameter	p1="Start" p1="Stop"
Request command	Measure?
Response data	d1
Return value	Same as the settings parameter

Pause	
Function	Pause
Description	Temporarily pauses measuring
Setting command	Pause, p1
Parameter	p1=“Clear” p1=“Pause”
Request command	Pause?
Response data	d1
Return value	Same as the settings parameter

Manual Store	
Function	Manual storage
Description	Saves the manual storage calculation result
Setting command	Manual␣Store, p1
Parameter	p1=“Start” (executes storing)
Remarks	There is no request command. This is the command that saves the result of the executed manual store.

Overwrite	
Function	Storage overwriting check
Description	It is possible to acquire whether saved data exists in the set store target (store mode / store name / store address) By acquiring this information before storing, you can prevent accidentally overwriting data.
Setting command	Overwrite, p1
Parameter	p1=“None” p1=“Exist”
Request command	Overwrite?
Response data	d1
Return value	Same as the settings parameter

Measurement Time Preset Manual	
Function	Manual storage measurement time
Description	Sets the manual storage measurement time
Setting command	Measurement␣Time␣Preset␣Manual, p1
Parameter	p1="10s" p1="1m" p1="5m" p1="10m" p1="15m" p1="30m" p1="1h" p1="8h" p1="24h" p1="Manual" (user settings)
Request command	Measurement␣Time␣Preset␣Manual?
Response data	d1
Return value	Same as the settings parameter

Measurement Time Manual (Num)	
Function	Manual storage measurement time (user setting: numeral)
Description	Sets the numerals when the manual storage measurement time is set to a user setting
Setting command	Measurement␣Time␣Manual␣(Num), p1
Parameter	p1=1–59 (when the time unit is "s" or "m") p1=1–24 (when the time unit is "h")
Request command	Measurement␣Time␣Manual␣(Num)?
Response data	d1
Return value	Same as the settings parameter

Measurement Time Manual (Unit)	
Function	Manual storage measurement time (user setting: unit)
Description	Sets the time unit when the manual storage measurement time is set to a user setting
Setting command	Measurement␣Time␣Manual␣(Unit), p1
Parameter	p1="s" p1="m" p1="h"
Request command	Measurement␣Time␣Manual␣(Unit)?
Response data	d1
Return value	Same as the settings parameter

Measurement Time Preset Auto (only when the optional program NX-43EX is installed)	
Function	Auto storage total measurement time
Description	Sets the auto storage total measurement time
Setting command	Measurement␣Time␣Preset␣Auto, p1
Parameter	p1="10s" p1="1m" p1="5m" p1="10m" p1="15m" p1="30m" p1="1h" p1="8h" p1="24h" p1="Manual" (user settings) p1="Unlimited"
Request command	Measurement␣Time␣Preset␣Auto?
Response data	d1
Return value	Same as the settings parameter

Measurement Time Auto (Num) (only when the optional program NX-43EX is installed)	
Function	Auto storage total measurement time (user setting: time)
Description	Sets the numerals when the auto storage total measurement time is set to a user setting
Setting command	Measurement␣Time␣Auto␣(Num), p1
Parameter	p1=1–59 (when the time unit is "s" or "m") p1=1–1000 (when the time unit is "h")
Request command	Measurement␣Time␣Auto␣(Num)?
Response data	d1
Return value	Same as the settings parameter

Measurement Time Auto (Unit) (only when the optional program NX-43EX is installed)	
Function	Auto storage total measurement time (user setting: unit)
Description	Sets the time unit when the auto storage total measurement time is set to a user setting
Setting command	Measurement␣Time␣Auto␣(Unit), p1
Parameter	p1="s" p1="m" p1="h"
Request command	Measurement␣Time␣Auto␣(Unit)?
Response data	d1
Return value	Same as the settings parameter

Lp Store Interval (only when the optional program NX-43EX is installed)	
Function	L_p store interval
Description	Sets the L_p store interval
Setting command	Lp␣Store␣Interval, p1
Parameter	p1="Off" p1="10ms" p1="25ms" p1="100ms" p1="200ms" p1="1s"
Request command	Lp␣Store␣Interval?
Response data	d1
Return value	Same as the settings parameter

Leq Calculation Interval Preset (only when the optional program NX-43EX is installed)	
Function	L_{eq} calculation interval
Description	Sets the L_{eq} calculation interval
Setting command	Leq␣Calculation␣Interval␣Preset, p1
Parameter	p1="Off" p1="10s" p1="1m" p1="5m" p1="10m" p1="15m" p1="30m" p1="1h" p1="8h" p1="24h" p1="Manual" (user settings)
Request command	Leq␣Calculation␣Interval␣Preset?
Response data	d1
Return value	Same as the settings parameter

Leq Calculation Interval (Num) (only when the optional program NX-43EX is installed)	
Function	L_{eq} calculation interval (user setting: time)
Description	Sets the numerals when the L_{eq} calculation interval is set to the user setting
Setting command	Leq␣Calculation␣Interval␣(Num), p1
Parameter	p1=1–59 (when the time unit is "s" or "m") p1=1–24 (when the time unit is "h")
Request command	Leq␣Calculation␣Interval␣(Num)?
Response data	d1
Return value	Same as the settings parameter

Leq Calculation Interval (Unit) (only when the optional program NX-43EX is installed)	
Function	L_{eq} calculation interval (user setting: unit)
Description	Sets the time unit when the L_{eq} calculation interval is set to a user setting
Setting command	Leq␣Calculation␣Interval␣(Unit), p1
Parameter	p1=“s” p1=“m” p1=“h”
Request command	Leq␣Calculation␣Interval␣(Unit)?
Response data	d1
Return value	Same as the settings parameter

Delay Time	
Function	Delayed measurement
Description	Sets the calculation delay time
Setting command	Delay␣Time, p1
Parameter	p1=“Off” p1=“1s” p1=“3s” p1=“5s” p1=“10s”
Request command	Delay␣Time?
Response data	d1
Return value	Same as the settings parameter

Back Erase	
Function	Back erase
Description	Sets the back erase time
Setting command	Back␣Erase, p1
Parameter	p1=“Off” p1=“1s” p1=“3s” p1=“5s”
Request command	Back␣Erase?
Response data	d1
Return value	Same as the settings parameter

Timer Auto Start Time (only when the optional program NX-43EX is installed)	
Function	Timer auto start time
Description	Sets the timer auto start time
Setting command	Timer␣Auto␣Start␣Time, p1/p2/p3␣p4:p5:p6
Parameter	p1=2023–2079 (year) p2=1–12 (month) p3=1–31 (day) p4=0–23 (hour) p5=0–59 (minute) p6=0 (second: this numeral can only be 0)
Request command	Timer␣Auto␣Start␣Time?
Response data	d1/d2/d3␣d4:d5:d6
Return value	Same as the settings parameter

Timer Auto Stop Time (only when the optional program NX-43EX is installed)	
Function	Timer auto stop time
Description	Sets the timer auto stop time
Setting command	Timer␣Auto␣Stop␣Time, p1/p2/p3␣p4:p5:p6
Parameter	p1=2023–2079 (year) p2=1–12 (month) p3=1–31 (day) p4=0–23 (hour) p5=0–59 (minute) p6=0 (second: this numeral can only be 0)
Request command	Timer␣Auto␣Stop␣Time?
Response data	d1/d2/d3␣d4:d5:d6
Return value	Same as the settings parameter

Timer Auto Interval (only when the optional program NX-43EX is installed)	
Function	Timer auto measurement interval
Description	Sets the timer auto measurement interval
Setting command	Timer␣Auto␣Interval, p1
Parameter	p1=“Off” p1=“5m” p1=“10m” p1=“15m” p1=“30m” p1=“1h” p1=“8h” p1=“24h”
Request command	Timer␣Auto␣Interval?
Response data	d1
Return value	Same as the settings parameter

Sleep Mode (only when the optional program NX-43EX is installed)	
Function	Sleep mode
Description	Sets ON/OFF of the sleep mode
Setting command	Sleep␣Mode, p1
Parameter	p1=“Off” p1=“On”
Request command	Sleep␣Mode?
Response data	d1
Return value	Same as the settings parameter

Trigger Mode (only when the optional program NX-43EX is installed)	
Function	Trigger mode
Description	Sets the trigger mode
Setting command	Trigger␣Mode, p1
Parameter	p1=“Off” p1=“Level” p1=“External”
Request command	Trigger␣Mode?
Response data	d1
Return value	Same as the settings parameter
Remarks	When using the I/O Port function, an external trigger cannot be used.

Level Trigger Channel (only when the optional program NX-43EX is installed)	
Function	Level trigger channel (trigger mode)
Description	Sets the trigger channel
Setting command	Level␣Trigger␣Channel, p1
Parameter	p1=“Main” p1=“Sub1” p1=“Sub2” p1=“Sub3” p1=“Band” (when NX-43RT is installed)
Request command	Level␣Trigger␣Channel?
Response data	d1
Return value	Same as the settings parameter

Level Trigger Band Frequency (only when the optional program NX-43RT is installed)	
Function	Level trigger band frequency (trigger mode)
Description	Sets the level trigger band frequency
Setting command	Level␣Trigger␣Band␣Frequency, p1
Parameter	p1=“16Hz” p1=“31Hz” p1=“63Hz” p1=“125Hz” p1=“250Hz” p1=“500Hz” p1=“1kHz” p1=“2kHz” p1=“4kHz” p1=“8kHz” p1=“16kHz”
Request command	Level␣Trigger␣Band␣Frequency?
Response data	d1
Return value	Same as the settings parameter

Level Trigger Band Offset (only when the optional program NX-43RT is installed)	
Function	Level trigger band frequency offset (trigger mode)
Description	Offsets the level trigger band frequency Divides the level trigger band frequency (center frequency of octave band*) for 1/3 octave band analysis into three values (Low, Center, and High) Example: When the level trigger band frequency is set to “1kHz”, “Low” will be 800Hz, “Center” 1kHz, and “High” 1.25kHz. * Refer to “IEC 61260-1 (JIS C 1513-1) center frequency” in the “NX-43RT instruction manual”
Setting command	Level␣Trigger␣Band␣Offset, p1
Parameter	p1=“Low” p1=“Center” p1=“High”
Request command	Level␣Trigger␣Band␣Offset?
Response data	d1
Return value	Same as the settings parameter

Level Trigger Level (only when the optional program NX-43EX is installed)	
Function	Trigger level (trigger mode)
Description	Sets the trigger level
Setting command	Level␣Trigger␣Level, p1
Parameter	p1=“30–130” * Can be set in 1-step increments
Request command	Level␣Trigger␣Level?
Response data	d1
Return value	Same as the settings parameter

Moving Leq Interval Preset (only when the optional program NX-43EX is installed)	
Function	Moving L_{eq} interval
Description	Sets the moving L_{eq} interval preset
Setting command	Moving␣Leq␣Interval␣Preset, p1
Parameter	p1=“10s” p1=“1m” p1=“5m” p1=“10m” p1=“15m” p1=“30m” p1=“1h” p1=“Manual” (user settings)
Request command	Moving␣Leq␣Interval␣Preset?
Response data	d1
Return value	Same as the settings parameter

Moving Leq Interval (Num) (only when the optional program NX-43EX is installed)	
Function	Moving L_{eq} interval (user setting: time)
Description	Sets the numerals when the moving L_{eq} interval is set to the user setting
Setting command	Moving␣Leq␣Interval␣(Num), p1
Parameter	p1=1–59 (when the time unit is “s” or “m”) p1=1 (when the time unit is “h”)
Request command	Moving␣Leq␣Interval␣(Num)?
Response data	d1
Return value	Same as the settings parameter

Moving Leq Interval (Unit) (only when the optional program NX-43EX is installed)	
Function	Moving L_{eq} interval (user setting: unit)
Description	Sets the time unit when the moving L_{eq} interval is set to a user setting
Setting command	Moving␣Leq␣Interval␣(Unit), p1
Parameter	p1=“s” p1=“m” p1=“h”
Request command	Moving␣Leq␣Interval␣(Unit)?
Response data	d1
Return value	Same as the settings parameter

TRM (only when the optional program NX-43EX is installed)	
Function	L_N mode, sampling data
Description	Sets the sampling data of the L_N mode
Setting command	TRM, p1
Parameter	p1=“Lp” p1=“Leq_1s”
Request command	TRM?
Response data	d1
Return value	Same as the settings parameter

Percentile 1 **Percentile 2** **Percentile 3** **Percentile 4** **Percentile 5** (only when the optional program NX-43EX is installed)	
Function	L_N mode, percentile
Description	Sets the percentile numerals of the L_N mode
Setting command	Percentile␣1, p1
Parameter	p1=0–999 (increases in 0.1 dB increments)
Request command	Percentile␣1?
Response data	d1
Return value	Same as the settings parameter

* Display Percentile 1 is used as an example.

Lp Mode (only when the optional program NX-43RT is installed)	
Function	L_p type
Description	Sets the L_p source
Setting command	Lp␣Mode, p1
Parameter	p1="Lp" p1="Leq"
Request command	Lp␣Mode?
Response data	d1
Return value	Same as the settings parameter

Waveform recording

Wave Rec Mode (only when the optional program NX-43WR is installed)	
Function	Recording function
Description	Sets the recording function
Setting command	Wave␣Rec␣Mode, p1
Parameter	p1="Off" p1="Event" p1="Total"
Request command	Wave␣Rec␣Mode?
Response data	d1
Return value	Same as the settings parameter

Wave Sampling Frequency (only when the optional program NX-43WR is installed)	
Function	Sampling frequency
Description	Sets the sampling frequency
Setting command	Wave␣Sampling␣Frequency, p1
Parameter	p1="12000" p1="24000" p1="48000"
Request command	Wave␣Sampling␣Frequency?
Response data	d1
Return value	Same as the settings parameter

Wave Bit Length (only when the optional program NX-43WR is installed)	
Function	Bit length
Description	Sets the bit length
Setting command	Wave␣Bit␣Length, p1
Parameter	p1="16bit" p1="24bit"
Request command	Wave␣Bit␣Length?
Response data	d1
Return value	Same as the settings parameter

Frequency Weighting (Wave) (only when the optional program NX-43WR is installed)	
Function	Frequency weighting (waveform recording)
Description	Sets the frequency weighting of waveform recording
Setting command	Frequency␣Weighting␣(Wave), p1
Parameter	p1="A" p1="C" p1="Z"
Request command	Frequency␣Weighting␣(Wave)?
Response data	d1
Return value	Same as the settings parameter

Wave Rec Range Upper (only when the optional program NX-43WR is installed)	
Function	Recording level range
Description	Sets the recording level range upper value
Setting command	Wave␣Rec␣Range␣Upper, p1
Parameter	p1=70–130 (increases in 10 dB increments) p1="Interlocking"
Request command	Wave␣Rec␣Range␣Upper?
Response data	d1
Return value	Same as the settings parameter

Wave Rec State (only when the optional program NX-43WR is installed)	
Function	Recording status
Description	Acquires the recording mode
Request command	Wave␣Rec␣State?
Response data	d1
Return value	d1=0: Stop d1=1: Interval d1=2: Level d1=3: Manual d1=4: Total

Wave Splitting Interval (only when the optional program NX-43WR is installed)	
Function	File splitting interval
Description	Sets the file splitting interval
Setting command	Wave␣Splitting␣Interval, p1
Parameter	p1="1m" p1="10m" p1="1h"
Request command	Wave␣Splitting␣Interval?
Response data	d1
Return value	Same as the settings parameter

Wave Manual Rec (only when the optional program NX-43WR is installed)	
Function	Manual recording
Description	Sets ON/OFF of the manual recording
Setting command	Wave␣Manual␣Rec, p1
Parameter	p1="Off" p1="On"
Request command	Wave␣Manual␣Rec?
Response data	d1
Return value	Same as the settings parameter

Wave Manual Pre-time (only when the optional program NX-43WR is installed)	
Function	Manual recording pre-time
Description	Sets the manual recording pre-time
Setting command	Wave␣Manual␣Pre-time, p1
Parameter	p1="Off" p1="1s" p1="5s" p1="10s" p1="30s" p1="1m"
Request command	Wave␣Manual␣Pre-time?
Response data	d1
Return value	Same as the settings parameter

Wave Level Rec (only when the optional program NX-43WR is installed)	
Function	Level recording
Description	Sets ON/OFF of the level recording
Setting command	Wave␣Level␣Rec, p1
Parameter	p1=“Off” p1=“On”
Request command	Wave␣Level␣Rec?
Response data	d1
Return value	Same as the settings parameter

Wave Level Trigger Channel (only when the optional program NX-43WR is installed)	
Function	Trigger channel (level recording)
Description	Sets the level recording trigger channel
Setting command	Wave␣Level␣Trigger␣Channel, p1
Parameter	p1=“Main” p1=“Sub1” p1=“Sub2” p1=“Sub3” p1=“Band” (when NX-43RT is installed)
Request command	Wave␣Level␣Trigger␣Channel?
Response data	d1
Return value	Same as the settings parameter

Wave Level Trigger Band Frequency (only when the optional program NX-43RT is installed)	
Function	Trigger band frequency (level recording)
Description	Sets the trigger band frequency when level recording
Setting command	Wave␣Level␣Trigger␣Band␣Frequency, p1
Parameter	p1=“16Hz” p1=“31Hz” p1=“63Hz” p1=“125Hz” p1=“250Hz” p1=“500Hz” p1=“1kHz” p1=“2kHz” p1=“4kHz” p1=“8kHz” p1=“16kHz”
Request command	Wave␣Level␣Trigger␣Band␣Frequency?
Response data	d1
Return value	Same as the settings parameter

Wave Level Trigger Band Offset (only when the optional program NX-43RT is installed)	
Function	Trigger band frequency offset (level recording)
Description	Offsets the level trigger band frequency when level recording Divides the level trigger band frequency (center frequency of octave band*) for 1/3 octave band analysis into three values (Low, Center, and High) Example: When the level trigger band frequency is set to “1kHz”, “Low” will be 800Hz, “Center” 1kHz, and “High” 1.25kHz. * Refer to “IEC 61260-1 (JIS C 1513-1) center frequency” in the “NX-43RT instruction manual”
Setting command	Wave␣Level␣Trigger␣Band␣Offset, p1
Parameter	p1=“Low” p1=“Center” p1=“High”
Request command	Wave␣Level␣Trigger␣Band␣Offset?
Response data	d1
Return value	Same as the settings parameter

Wave Level Trigger Level (only when the optional program NX-43WR is installed)	
Function	Start level (level recording)
Description	Sets the level recording trigger level
Setting command	Wave␣Level␣Trigger␣Level, p1
Parameter	p1=30–130 (the setting value increases in 1-step increments)
Request command	Wave␣Level␣Trigger␣Level?
Response data	d1
Return value	Same as the settings parameter

Wave Level Pre-time (only when the optional program NX-43WR is installed)	
Function	Pre-time (level recording)
Description	Sets the level recording pre-time
Setting command	Wave␣Level␣Pre-time, p1
Parameter	p1=“Off” p1=“1s” p1=“5s” p1=“10s” p1=“30s” p1=“1m”
Request command	Wave␣Level␣Pre-time?
Response data	d1
Return value	Same as the settings parameter

Wave Level Maximum Recording Time (only when the optional program NX-43WR is installed)	
Function	Maximum recording time
Description	Sets the maximum recording time of level recording
Setting command	Wave␣Level␣Maximum␣Recording␣Time, p1
Parameter	p1=“Off” p1=“10m”
Request command	Wave␣Level␣Maximum␣Recording␣Time?
Response data	d1
Return value	Same as the settings parameter

Wave Level Reference Time Interval 1 **Wave Level Reference Time Interval 2** **Wave Level Reference Time Interval 3** **Wave Level Reference Time Interval 4** (only when the optional program NX-43WR is installed)	
Function	Threshold per time zone
Description	Sets ON/OFF of the threshold per time zone time
Setting command*	Wave␣Level␣Reference␣Time␣Interval␣1, p1
Parameter	p1=“Off” p1=“On”
Request command*	Wave␣Level␣Reference␣Time␣Interval␣1?
Response data	d1
Return value	Same as the settings parameter

* Wave Level Reference Time Interval 1 is used as an example.

Wave Level Reference Time 1 **Wave Level Reference Time 2** **Wave Level Reference Time 3** **Wave Level Reference Time 4** (only when the optional program NX-43WR is installed)	
Function	Threshold per time zone time
Description	Sets the start time of time zone 1 to 4 for the threshold per time zone of level recording
Setting command*	Wave␣Level␣Reference␣Time␣1, p1
Parameter	p1=00–23
Request command*	Wave␣Level␣Reference␣Time␣1?
Response data	d1
Return value	Same as the settings parameter

* Wave Level Reference Time 1 is used as an example.

Wave Level Reference Time 1 Level **Wave Level Reference Time 2 Level** **Wave Level Reference Time 3 Level** **Wave Level Reference Time 4 Level** (only when the optional program NX-43WR is installed)	
Function	Threshold per time zone level
Description	Sets the level of time zone 1 to 4 for the threshold per time zone time of level recording
Setting command*	Wave␣Level␣Reference␣Time␣1␣Level, p1
Parameter	p1=30–130 (the setting value increases in 1-step increments)
Request command*	Wave␣Level␣Reference␣Time␣1␣Level?
Response data	d1
Return value	Same as the settings parameter

* Wave Level Reference Time 1 Level is used as an example.

Wave Interval Rec (only when the optional program NX-43WR is installed)	
Function	Interval recording
Description	Sets ON/OFF of the interval recording
Setting command	Wave␣Interval␣Rec, p1
Parameter	p1=“Off” p1=“On”
Request command	Wave␣Interval␣Rec?
Response data	d1
Return value	Same as the settings parameter

Wave Interval Rec Interval (only when the optional program NX-43WR is installed)	
Function	Interval recording_Recording interval
Description	Sets the recording interval of interval recording
Setting command	Wave␣Interval␣Rec␣Interval, p1
Parameter	p1=“10m” p1=“1h”
Request command	Wave␣Interval␣Rec␣Interval?
Response data	d1
Return value	Same as the settings parameter

Wave Interval Rec Time (only when the optional program NX-43WR is installed)	
Function	Interval recording_Recording time
Description	Sets the recording time of interval recording
Setting command	Wave␣Interval␣Rec␣Time, p1
Parameter	p1=“15s” p1=“1m” p1=“2m”
Request command	Wave␣Interval␣Rec␣Time?
Response data	d1
Return value	Same as the settings parameter

I/O

AC OUT	
Function	AC output
Description	Sets the AC output channel
Setting command	AC␣OUT, p1
Parameter	p1="Off" p1="Main" p1="Sub1" p1="Sub2" p1="Sub3" p1="Band" (when NX-43RT is installed) p1="A" p1="C" p1="Z"
Request command	AC␣OUT?
Response data	d1
Return value	Same as the settings parameter

AC Out Band Frequency (only when the optional program NX-43RT is installed)	
Function	AC output band frequency
Description	Sets the band frequency for AC output
Setting command	AC␣Out␣Band␣Frequency, p1
Parameter	p1="16Hz" p1="31Hz" p1="63Hz" p1="125Hz" p1="250Hz" p1="500Hz" p1="1kHz" p1="2kHz" p1="4kHz" p1="8kHz" p1="16kHz"
Request command	AC␣Out␣Band␣Frequency?
Response data	d1
Return value	Same as the settings parameter

AC Out Band Offset (only when the optional program NX-43RT is installed)	
Function	AC output band frequency offset
Description	Offsets the band frequency for AC output Divides the band frequency of the output (center frequency of octave band*) for 1/3 octave band analysis into three values (Low, Center, and High) Example: When the band frequency of the output is set to “1kHz”, “Low” will be 800Hz, “Center” 1kHz, and “High” 1.25kHz. * Refer to “IEC 61260-1 (JIS C 1513-1) center frequency” in the “NX-43RT instruction manual”
Setting command	AC␣Out␣Band␣Offset, p1
Parameter	p1=“Low” p1=“Center” p1=“High”
Request command	AC␣Out␣Band␣Offset?
Response data	d1
Return value	Same as the settings parameter

DC OUT	
Function	DC output
Description	Sets the DC output
Setting command	DC␣OUT, p1
Parameter	p1=“Off” p1=“Main” p1=“Sub1” p1=“Sub2” p1=“Sub3” p1=“Band” (when NX-43RT is installed)
Request command	DC␣OUT?
Response data	d1
Return value	Same as the settings parameter

DC Out Band Frequency (only when the optional program NX-43RT is installed)	
Function	DC output band frequency
Description	Sets the band frequency for DC output
Setting command	DC␣Out␣Band␣Frequency, p1
Parameter	p1="POA" p1="16Hz" p1="31Hz" p1="63Hz" p1="125Hz" p1="250Hz" p1="500Hz" p1="1kHz" p1="2kHz" p1="4kHz" p1="8kHz" p1="16kHz"
Request command	DC␣Out␣Band␣Frequency?
Response data	d1
Return value	Same as the settings parameter

DC Out Band Offset (only when the optional program NX-43RT is installed)	
Function	DC output band frequency offset
Description	Offsets the band frequency for DC output Divides the band frequency of the output (center frequency of octave band*) for 1/3 octave band analysis into three values (Low, Center, and High) Example: When the band frequency of the output is set to "1kHz", "Low" will be 800Hz, "Center" 1kHz, and "High" 1.25kHz. * Refer to "IEC 61260-1 (JIS C 1513-1) center frequency" in the "NX-43RT instruction manual"
Setting command	DC␣Out␣Band␣Offset, p1
Parameter	p1="Low" p1="Center" p1="High"
Request command	DC␣Out␣Band␣Offset?
Response data	d1
Return value	Same as the settings parameter

Output Range Upper	
Function	Electrical output full scale
Description	Sets the maximum electrical output value
Setting command	Output␣Range␣Upper, p1
Parameter	p1=70–130 p1="Interlocking"
Request command	Output␣Range␣Upper?
Response data	d1
Return value	Same as the settings parameter

Reference Signal Output	
Function	Reference signal output
Description	Sets the reference signal output settings
Setting command	Reference␣Signal␣Output, p1
Parameter	p1="Off" p1="On"
Request command	Reference␣Signal␣Output?
Response data	d1
Return value	Same as the settings parameter

IO Func	
Function	IO port
Description	Sets the port used for RS-232C communication
Setting command	IO␣Func, p1
Parameter	p1="Off" p1="Communication" *1 *2 p1="Printer" *1 p1="Comparator" *1 *3
Request command	IO␣Func?
Response data	d1
Remarks	*1 The I/O Port function cannot be used when using an external trigger for the measurement in trigger mode. *2 When using Communication (TCP), if you turn off the communication control or turn on the USB connection, LAN TCP, or web application, the communication will be disconnected. *3 The comparator can be used only when NX-43EX is installed.

Baud Rate	
Function	RS-232C communication speed
Description	Sets the RS-232C communication speed
Setting command	Baud␣Rate, p1
Parameter	p1="9600" p1="19200" p1="38400" p1="57600" p1="115200"
Request command	Baud␣Rate?
Response data	d1
Return value	Same as the settings parameter

Comparator Channel	
Function	Comparator channel
Description	Sets the comparator channel
Setting command	Comparator␣Channel, p1
Parameter	p1="Main" p1="Sub1" p1="Sub2" p1="Sub3" p1="Band" (when NX-43RT is installed)
Request command	Comparator␣Channel?
Response data	d1
Return value	Same as the settings parameter

Comparator Band Frequency (only when the optional program NX-43RT is installed)	
Function	Comparator band frequency
Description	Sets the frequency band when the band is selected on the comparator output channel
Setting command	Comparator␣Band␣Frequency, p1
Parameter	p1="16Hz" p1="31Hz" p1="63Hz" p1="125Hz" p1="250Hz" p1="500Hz" p1="1kHz" p1="2kHz" p1="4kHz" p1="8kHz" p1="16kHz"
Request command	Comparator␣Band␣Frequency?
Response data	d1
Return value	Same as the settings parameter

Comparator Band Offset (only when the optional program NX-43RT is installed)	
Function	Comparator band frequency offset
Description	Offsets the frequency band when the band is selected on the comparator output channel Divides the band frequency of the output (center frequency of octave band*) for 1/3 octave band analysis into three values (Low, Center, and High) Example: When the band frequency of the output is set to “1kHz”, “Low” will be 800Hz, “Center” 1kHz, and “High” 1.25kHz. * Refer to “IEC 61260-1 (JIS C 1513-1) center frequency” in the “NX-43RT instruction manual”
Setting command	Comparator␣Band␣Offset, p1
Parameter	p1=“Low” p1=“Center” p1=“High”
Request command	Comparator␣Band␣Offset?
Response data	d1
Return value	Same as the settings parameter

Comparator Level (only when the optional program NX-43EX is installed)	
Function	Comparator level
Description	Sets the comparator level
Setting command	Comparator␣Level, p1
Parameter	p1=30–130 (the setting value increases in 1-step increments)
Request command	Comparator␣Level?
Response data	d1
Return value	Same as the settings parameter

USB Class	
Function	USB communication
Description	Sets the USB communication
Setting command	USB␣Class, p1
Parameter	p1=“Off” p1=“CDC” (communication)*1 p1=“CDC/MSC” (mass storage)*2
Request command	USB␣Class?
Response data	d1
Return value	Same as the settings parameter
Remarks	*1 When using CDC (Communication), if you turn off the communication or turn on I/O Port Communication, LAN TCP, or web application, the communication will be disconnected. *2 Only this command can be used when setting CDC/MSC. When using MSC (Mass Storage), the I/O Port Communication, LAN TCP, and LAN FTP functions cannot be used.

Ethernet (only when the optional program NX-43EX is installed)	
Function	LAN function
Description	Sets ON/OFF of the LAN function
Setting command	Ethernet, p1
Parameter	p1="Off" p1="On"
Request command	Ethernet?
Response data	d1
Return value	Same as the settings parameter

Ethernet DHCP (only when the optional program NX-43EX is installed)	
Function	IP address automatic setting
Description	Sets ON/OFF of IP address automatic setting
Setting command	Ethernet␣DHCP, p1
Parameter	p1="Off" p1="On"
Request command	Ethernet␣DHCP?
Response data	d1
Return value	Same as the settings parameter

Ethernet IP (only when the optional program NX-43EX is installed)	
Function	IP address
Description	Sets the IP address of this device
Setting command	Ethernet␣IP, p1
Parameter	p1=0.0.0.0–255.255.255.255
Request command	Ethernet␣IP?
Response data	d1
Return value	Same as the settings parameter

Ethernet Subnet (only when the optional program NX-43EX is installed)	
Function	Subnet mask
Description	Sets the subnet mask
Setting command	Ethernet␣Subnet, p1
Parameter	p1=0.0.0.0–255.255.255.255
Request command	Ethernet␣Subnet?
Response data	d1
Return value	Same as the settings parameter

Ethernet Gateway (only when the optional program NX-43EX is installed)	
Function	Default gateway
Description	Sets the default gateway
Setting command	Ethernet␣Gateway, p1
Parameter	p1=0.0.0.0–255.255.255.255
Request command	Ethernet␣Gateway?
Response data	d1
Return value	Same as the settings parameter

Web (only when the optional program NX-43EX is installed)	
Function	Web app
Description	Sets whether the web application is ON/OFF
Setting command	Web, p1
Parameter	p1=“Off” p1=“On”
Request command	Web?
Response data	d1
Return value	Same as the settings parameter
Remarks	The Timer Auto store, Trigger Mode, Delay Time, I/O Port Communication, USB Connection, LAN TCP, and LAN FTP functions cannot be used when using the web application.

FTP (only when the optional program NX-43EX is installed)	
Function	File transfer (FTP)
Description	Sets ON/OFF of FTP
Setting command	FTP, p1
Parameter	p1=“Off” p1=“On”
Request command	FTP?
Response data	d1
Return value	Same as the settings parameter
Remarks	When using FTP (file transfer function), if you turn off the communication or turn on the USB mass storage or web application, communication will stop.

TCP (only when the optional program NX-43EX is installed)	
Function	Communication control (TCP)
Description	Sets ON/OFF of communication control
Setting command	TCP, p1
Parameter	p1="Off" p1="On"
Request command	TCP?
Response data	d1
Return value	Same as the settings parameter
Remarks	When using TCP (communication control), if you turn off the communication or turn on I/O Port Communication, USB connection, or web application, communication will stop.

Data output

The return value format of each data output command (DOD, DRD, DLC) is of a fixed length.
Therefore, (invalid) channels for which calculation is not performed are output as invalid values.
Invalid values are as follows.

Value : ␣␣-.-
OV/UN : -

“xxx.x” is right-aligned and the missing digits are filled with spaces.

<Examples>
100.0
␣67.3
␣-3.3

* The symbol “␣” means a space.

DOD: calculation or instantaneous OV/UN
DRD: instantaneous OV/UN
DLC: calculation OV/UN

DOD		
Function	Output displayed value	
Description	Leave a sending interval of at least one second.	
Request command	DOD?	
Response data	d0, d1, d2, ..., d63	
Return value	d0 “xxx.x” Main channel L_p d1 “xxx.x” Main channel L_{eq} d2 “xxx.x” Main channel L_E d3 “xxx.x” Main channel L_{max} d4 “xxx.x” Main channel L_{min} d5 “xxx.x” Main channel L_{N1} d6 “xxx.x” Main channel L_{N2} d7 “xxx.x” Main channel L_{N3} d8 “xxx.x” Main channel L_{N4} d9 “xxx.x” Main channel L_{N5} d10 “xxx.x” Main channel L_{peak} d11 “xxx.x” Main channel L_{leq} d12 “xxx.x” Main channel $L_{eq,mov}$ d13 “xxx.x” Main channel L_{tm5} d14 “0”/“1” Main channel instantaneous/calculation Over d15 “0”/“1” Main channel instantaneous/calculation Under d16 “xxx.x” Sub1 channel L_p d17 “xxx.x” Sub1 channel L_{eq} d18 “xxx.x” Sub1 channel L_E d19 “xxx.x” Sub1 channel L_{max} d20 “xxx.x” Sub1 channel L_{min} d21 “xxx.x” Sub1 channel L_{N1} d22 “xxx.x” Sub1 channel L_{N2} d23 “xxx.x” Sub1 channel L_{N3} d24 “xxx.x” Sub1 channel L_{N4} d25 “xxx.x” Sub1 channel L_{N5} d26 “xxx.x” Sub1 channel L_{peak} d27 “xxx.x” Sub1 channel L_{leq} d28 “xxx.x” Sub1 channel $L_{eq,mov}$ d29 “xxx.x” Sub1 channel L_{tm5} d30 “0”/“1” Sub1 channel instantaneous/calculation Over d31 “0”/“1” Sub1 channel instantaneous/calculation Under	d32 “xxx.x” Sub2 channel L_p d33 “xxx.x” Sub2 channel L_{eq} d34 “xxx.x” Sub2 channel L_E d35 “xxx.x” Sub2 channel L_{max} d36 “xxx.x” Sub2 channel L_{min} d37 “xxx.x” Sub2 channel L_{N1} d38 “xxx.x” Sub2 channel L_{N2} d39 “xxx.x” Sub2 channel L_{N3} d40 “xxx.x” Sub2 channel L_{N4} d41 “xxx.x” Sub2 channel L_{N5} d42 “xxx.x” Sub2 channel L_{peak} d43 “xxx.x” Sub2 channel L_{leq} d44 “xxx.x” Sub2 channel $L_{eq,mov}$ d45 “xxx.x” Sub2 channel L_{tm5} d46 “0”/“1” Sub2 channel instantaneous/calculation Over d47 “0”/“1” Sub2 channel instantaneous/calculation Under d48 “xxx.x” Sub3 channel L_p d49 “xxx.x” Sub3 channel L_{eq} d50 “xxx.x” Sub3 channel L_E d51 “xxx.x” Sub3 channel L_{max} d52 “xxx.x” Sub3 channel L_{min} d53 “xxx.x” Sub3 channel L_{N1} d54 “xxx.x” Sub3 channel L_{N2} d55 “xxx.x” Sub3 channel L_{N3} d56 “xxx.x” Sub3 channel L_{N4} d57 “xxx.x” Sub3 channel L_{N5} d58 “xxx.x” Sub3 channel L_{peak} d59 “xxx.x” Sub3 channel L_{leq} d60 “xxx.x” Sub3 channel $L_{eq,mov}$ d61 “xxx.x” Sub3 channel L_{tm5} d62 “0”/“1” Sub3 channel instantaneous/calculation Over d63 “0”/“1” Sub3 channel instantaneous/calculation Under
Remarks	• There is no setting command. • d14, d15, d30, d31, d46, d47, d62 and d63 are sent with fixed 1-digit length. • The rest are sent with a fixed 5-digit length and padded with spaces if necessary.	

DOD
(only when the optional program NX-43RT is installed)

Function	Output displayed value	
Description	The data format of the response differs depending on the calculated value displayed on the screen.	
Request command	DOD?	
Display	Lp, Leq, LE, Lmax, Lmin, LN1 to LN5, Leq,mov	Ly
Response data	d0, d1, ..., d*M*	d0, d1, ..., d21
Return value	d0 “xxx.x” Main channel L_p d1 “0”/“1” Main channel instantaneous/calculation Over d2 “0”/“1” Main channel instantaneous/calculation Under d3 “xxx.x” Sub1 channel d4 “0”/“1” Sub1 channel instantaneous/calculation Over d5 “0”/“1” Sub1 channel instantaneous/calculation Under d6 “xxx.x” Sub2 channel d7 “0”/“1” Sub2 channel instantaneous/calculation Over d8 “0”/“1” Sub2 channel instantaneous/calculation Under d9 “xxx.x” Sub3 channel d10 “0”/“1” Sub3 channel instantaneous/calculation Over d11 “0”/“1” Sub3 channel instantaneous/calculation Under d12 “xxx.x” Partial Overall (POA) d13 “xxx.x” Band d14 “xxx.x” Sub Band … … … … “xxx.x” Band*N* d*M* “0”/“1” Band instantaneous/calculation Over	d0 “xxx.x” Main channel L_{peak} d1 “xxx.x” Main channel L_{leq} d2 “xxx.x” Main channel L_{tm5} d3 “0”/“1” Main channel instantaneous/calculation Over d4 “0”/“1” Main channel instantaneous/calculation Under d5 “xxx.x” Sub1 channel L_{peak} d6 “xxx.x” Sub1 channel L_{leq} d7 “xxx.x” Sub1 channel L_{tm5} d8 “0”/“1” Sub1 channel instantaneous/calculation Over d9 “0”/“1” Sub1 channel instantaneous/calculation Under d10 “xxx.x” Sub2 channel L_{peak} d11 “xxx.x” Sub2 channel L_{leq} d12 “xxx.x” Sub2 channel L_{tm5} d13 “0”/“1” Sub2 channel instantaneous/calculation Over d14 “0”/“1” Sub2 channel instantaneous/calculation Under d15 “xxx.x” Sub3 channel L_{peak} d16 “xxx.x” Sub3 channel L_{leq} d17 “xxx.x” Sub3 channel L_{tm5} d18 “0”/“1” Sub3 channel instantaneous/calculation Over d19 “0”/“1” Sub3 channel instantaneous/calculation Under d20 “xxx.x” Measure Differential 1 d21 “xxx.x” Measure Differential 2
Remarks	• *M* or *N* depends on analysis mode and frequency weighting characteristics. • Results are displayed from 16 Hz to 16 kHz for octave band analysis, and 12.5 Hz to 20 kHz for 1/3 octave band analysis.	

DRD (only when the optional program NX-43EX is installed)		
Function	Continuous output	
Description	Data is sent to the computer continuously every 100 ms. To stop data being transferred, send the stop request transmission code <SUB> (hexadecimal notation: 1A$_H$).	
Request command	DRD?	
Response data	d0, d1, d2, ..., d32	
Return value	d0 “xxx” counter (1–600) d1 “xxx.x” Main channel L_p d2 “xxx.x” Main channel L_{eq} d3 “xxx.x” Main channel L_{max} d4 “xxx.x” Main channel L_{min} d5 “xxx.x” Main channel L_{peak} d6 “xxx.x” Main channel L_{leq} d7 “0”/“1” Main channel instantaneous Over d8 “0”/“1” Main channel instantaneous Under d9 “xxx.x” Sub1 channel L_p d10 “xxx.x” Sub1 channel L_{eq} d11 “xxx.x” Sub1 channel L_{max} d12 “xxx.x” Sub1 channel L_{min} d13 “xxx.x” Sub1 channel L_{peak} d14 “xxx.x” Sub1 channel L_{leq} d15 “0”/“1” Sub1 channel instantaneous Over d16 “0”/“1” Sub1 channel instantaneous Under d17 “xxx.x” Sub2 channel L_p d18 “xxx.x” Sub2 channel L_{eq}	d19 “xxx.x” Sub2 channel L_{max} d20 “xxx.x” Sub2 channel L_{min} d21 “xxx.x” Sub2 channel L_{peak} d22 “xxx.x” Sub2 channel L_{leq} d23 “0”/“1” Sub2 channel instantaneous Over d24 “0”/“1” Sub2 channel instantaneous Under d25 “xxx.x” Sub3 channel L_p d26 “xxx.x” Sub3 channel L_{eq} d27 “xxx.x” Sub3 channel L_{max} d28 “xxx.x” Sub3 channel L_{min} d29 “xxx.x” Sub3 channel L_{peak} d30 “xxx.x” Sub3 channel L_{leq} d31 “0”/“1” Sub3 channel instantaneous Over d32 “0”/“1” Sub3 channel instantaneous Under
Remarks	• There is no setting command. • This can be used when the baud rate is set to 19200 bps or higher with RS-232C.	

DRD
(only when the optional program NX-43RT is installed)

Function	Continuous output
Description	Data is sent to the computer continuously every 100 ms. To stop data being transferred, send the stop request transmission code <SUB> (hexadecimal notation: 1A$_H$).
Request command	DRD?
Response data	d0, d1, d2, ..., d*M*

Return value

d0	“xxx”	counter (1–600)	d20	“xxx.x”	Sub2 channel L_{min}
d1	“xxx.x”	Main channel L_p	d21	“xxx.x”	Sub2 channel L_{peak}
d2	“xxx.x”	Main channel L_{eq}	d22	“xxx.x”	Sub2 channel L_{leq}
d3	“xxx.x”	Main channel L_{max}	d23	“0”/“1”	Sub2 channel instantaneous Over
d4	“xxx.x”	Main channel L_{min}	d24	“0”/“1”	Sub2 channel instantaneous Under
d5	“xxx.x”	Main channel L_{peak}	d25	“xxx.x”	Sub3 channel L_p
d6	“xxx.x”	Main channel L_{leq}	d26	“xxx.x”	Sub3 channel L_{eq}
d7	“0”/“1”	Main channel instantaneous Over	d27	“xxx.x”	Sub3 channel L_{max}
d8	“0”/“1”	Main channel instantaneous Under	d28	“xxx.x”	Sub3 channel L_{min}
d9	“xxx.x”	Sub1 channel L_p	d29	“xxx.x”	Sub3 channel L_{peak}
d10	“xxx.x”	Sub1 channel L_{eq}	d30	“xxx.x”	Sub3 channel L_{leq}
d11	“xxx.x”	Sub1 channel L_{max}	d31	“0”/“1”	Sub3 channel instantaneous Over
d12	“xxx.x”	Sub1 channel L_{min}	d32	“0”/“1”	Sub3 channel instantaneous Under
d13	“xxx.x”	Sub1 channel L_{peak}	d33	“xxx.x”	Partial Overall (POA)
d14	“xxx.x”	Sub1 channel L_{leq}	d34	“xxx.x”	Band
d15	“0”/“1”	Sub1 channel instantaneous Over	d35	“xxx.x”	Sub Band
d16	“0”/“1”	Sub1 channel instantaneous Under	…	…	…
d17	“xxx.x”	Sub2 channel L_p	…	“xxx.x”	Band*N*
d18	“xxx.x”	Sub2 channel L_{eq}	d*M*	“0”/“1”	Band instantaneous Over
d19	“xxx.x”	Sub2 channel L_{max}			

Remarks

- There is no setting command.
- This can be used when the baud rate is set to 57600 bps or higher with RS-232C.
- *M* or *N* depends on analysis mode and frequency weighting characteristics.
- Results are displayed from 16 Hz to 16 kHz for octave band analysis, and 12.5 Hz to 20 kHz for 1/3 octave band analysis.

DRD?status
(only when the optional program NX-43EX is installed)

Function	Continuous output (attaching status information)
Description	Data is sent to the computer continuously every 100 ms. Adds various status information to the end of the response data. To stop data being transferred, send the stop request transmission code <SUB> (hexadecimal notation: 1AH).
Request command	DRD?status
Response data	d0, d1, d2, ..., d37

Return value

d0	“xxx”	counter (1–600)	d19	“xxx.x”	Sub2 channel L_{max}
d1	“xxx.x”	Main channel L_p	d20	“xxx.x”	Sub2 channel L_{min}
d2	“xxx.x”	Main channel L_{eq}	d21	“xxx.x”	Sub2 channel L_{peak}
d3	“xxx.x”	Main channel L_{max}	d22	“xxx.x”	Sub2 channel L_{leq}
d4	“xxx.x”	Main channel L_{min}	d23	“0”/“1”	Sub2 channel instantaneous Over
d5	“xxx.x”	Main channel L_{peak}	d24	“0”/“1”	Sub2 channel instantaneous Under
d6	“xxx.x”	Main channel L_{leq}	d25	“xxx.x”	Sub3 channel L_p
d7	“0”/“1”	Main channel instantaneous Over	d26	“xxx.x”	Sub3 channel L_{eq}
d8	“0”/“1”	Main channel instantaneous Under	d27	“xxx.x”	Sub3 channel L_{max}
d9	“xxx.x”	Sub1 channel L_p	d28	“xxx.x”	Sub3 channel L_{min}
d10	“xxx.x”	Sub1 channel L_{eq}	d29	“xxx.x”	Sub3 channel L_{peak}
d11	“xxx.x”	Sub1 channel L_{max}	d30	“xxx.x”	Sub3 channel L_{leq}
d12	“xxx.x”	Sub1 channel L_{min}	d31	“0”/“1”	Sub3 channel instantaneous Over
d13	“xxx.x”	Sub1 channel L_{peak}	d32	“0”/“1”	Sub3 channel instantaneous Under
d14	“xxx.x”	Sub1 channel L_{leq}	d33	“YYYY/MM/DD hh:mm:ss.sss”	time stamp
d15	“0”/“1”	Sub1 channel instantaneous Over	d34	“I”/“E”/“U”	Power supply type
d16	“0”/“1”	Sub1 channel instantaneous Under	d35	“F”/“M”/“L”/“D”/“E”	Battery level
d17	“xxx.x”	Sub2 channel L_p	d36	“xxxxx”	SD card remaining capacity (MB)
d18	“xxx.x”	Sub2 channel L_{eq}	d37	“M”/“S”	Measurement status (Measure, Stop)

Remarks

- There is no setting command.
- This can be used when the baud rate is set to 38400 bps or higher with RS-232C.

• Power supply type

These letters show the type of power supply type used by the device.

I	(Internal) Battery
E	DC power supply (AC adapter or battery pack)
U	USB

• Battery level

These letters show the remaining battery capacity.

F	 (Full)
M	 (Mid)
L	 (Low)
D	 (Danger)
E	 Flashing (Empty)

DRD?status
(only when the optional program NX-43RT is installed)

Function

Continuous output (attaching status information)

Description

Data is sent to the computer continuously every 100 ms.
Adds various status information to the end of the response data.
To stop data being transferred, send the stop request transmission code <SUB> (hexadecimal notation: 1AH).

Request command

DRD?status

Response data

d0, d1, d2, ..., d*M*

Return value

d0	“xxx”	counter (1–600)	d22	“xxx.x”	Sub2 channel L_{leq}
d1	“xxx.x”	Main channel L_p	d23	“0”/“1”	Sub2 channel instantaneous Over
d2	“xxx.x”	Main channel L_{eq}	d24	“0”/“1”	Sub2 channel instantaneous Under
d3	“xxx.x”	Main channel L_{max}	d25	“xxx.x”	Sub3 channel L_p
d4	“xxx.x”	Main channel L_{min}	d26	“xxx.x”	Sub3 channel L_{eq}
d5	“xxx.x”	Main channel L_{peak}	d27	“xxx.x”	Sub3 channel L_{max}
d6	“xxx.x”	Main channel L_{leq}	d28	“xxx.x”	Sub3 channel L_{min}
d7	“0”/“1”	Main channel instantaneous Over	d29	“xxx.x”	Sub3 channel L_{peak}
d8	“0”/“1”	Main channel instantaneous Under	d30	“xxx.x”	Sub3 channel L_{leq}
d9	“xxx.x”	Sub1 channel L_p	d31	“0”/“1”	Sub3 channel instantaneous Over
d10	“xxx.x”	Sub1 channel L_{eq}	d32	“0”/“1”	Sub3 channel instantaneous Under
d11	“xxx.x”	Sub1 channel L_{max}	d33	“xxx.x”	Partial Overall (POA)
d12	“xxx.x”	Sub1 channel L_{min}	d34	“xxx.x”	Band
d13	“xxx.x”	Sub1 channel L_{peak}	d35	“xxx.x”	Sub Band
d14	“xxx.x”	Sub1 channel L_{leq}	…	…	…
d15	“0”/“1”	Sub1 channel instantaneous Over	…	“xxx.x”	Band*N*
d16	“0”/“1”	Sub1 channel instantaneous Under	…	“0”/“1”	Band instantaneous Over
d17	“xxx.x”	Sub2 channel L_p	…	“YYYY/MM/DD hh:mm:ss.sss”	time stamp
d18	“xxx.x”	Sub2 channel L_{eq}	…	“I”/“E”/“U”	Power supply type
d19	“xxx.x”	Sub2 channel L_{max}	…	“F”/“M”/“L”/“D”/“E”	Battery level
d20	“xxx.x”	Sub2 channel L_{min}	…	“xxxxx”	SD card remaining capacity (MB)
d21	“xxx.x”	Sub2 channel L_{peak}	d*M*	“M”/“S”	Measurement status (Measure, Stop)

Remarks

- There is no setting command.
- This can be used when the baud rate is set to 57600 bps or higher with RS-232C.
- *M* or *N* depends on analysis mode and frequency weighting characteristics.
- Results are displayed from 16 Hz to 16 kHz for octave band analysis, and 12.5 Hz to 20 kHz for 1/3 octave band analysis.

• Power supply type

These letters show the type of power supply type used by the device.

I	(Internal) Battery
E	DC power supply (AC adapter or battery pack)
U	USB

• Battery level

These letters show the remaining battery capacity.

F	 (Full)
M	 (Mid)
L	 (Low)
D	 (Danger)
E	 Flashing (Empty)

DLC

Function	Final calculation result output
Description	Data of the final calculation result is sent to the computer. <E.g.: When acquiring calculation results sequentially without stopping measuring while in Auto Store mode> (1) Leq Calc.Interval = measurement starts in 10 s (2) Send DLC? approximately every 10 s
Request command	DLC?
Response data	d0, d1, d2, ..., d63

Return value

d0	“xxx.x”	Main channel L_p	d32	“xxx.x”	Sub2 channel L_p
d1	“xxx.x”	Main channel L_{eq}	d33	“xxx.x”	Sub2 channel L_{eq}
d2	“xxx.x”	Main channel L_E	d34	“xxx.x”	Sub2 channel L_E
d3	“xxx.x”	Main channel L_{max}	d35	“xxx.x”	Sub2 channel L_{max}
d4	“xxx.x”	Main channel L_{min}	d36	“xxx.x”	Sub2 channel L_{min}
d5	“xxx.x”	Main channel L_{N1}	d37	“xxx.x”	Sub2 channel L_{N1}
d6	“xxx.x”	Main channel L_{N2}	d38	“xxx.x”	Sub2 channel L_{N2}
d7	“xxx.x”	Main channel L_{N3}	d39	“xxx.x”	Sub2 channel L_{N3}
d8	“xxx.x”	Main channel L_{N4}	d40	“xxx.x”	Sub2 channel L_{N4}
d9	“xxx.x”	Main channel L_{N5}	d41	“xxx.x”	Sub2 channel L_{N5}
d10	“xxx.x”	Main channel L_{peak}	d42	“xxx.x”	Sub2 channel L_{peak}
d11	“xxx.x”	Main channel L_{leq}	d43	“xxx.x”	Sub2 channel L_{leq}
d12	“xxx.x”	Main channel $L_{eq,mov}$	d44	“xxx.x”	Sub2 channel $L_{eq,mov}$
d13	“xxx.x”	Main channel L_{tm5}	d45	“xxx.x”	Sub2 channel L_{tm5}
d14	“0”/“1”	Main channel calculation Over	d46	“0”/“1”	Sub2 channel calculation Over
d15	“0”/“1”	Main channel calculation Under	d47	“0”/“1”	Sub2 channel calculation Under
d16	“xxx.x”	Sub1 channel L_p	d48	“xxx.x”	Sub3 channel L_p
d17	“xxx.x”	Sub1 channel L_{eq}	d49	“xxx.x”	Sub3 channel L_{eq}
d18	“xxx.x”	Sub1 channel L_E	d50	“xxx.x”	Sub3 channel L_E
d19	“xxx.x”	Sub1 channel L_{max}	d51	“xxx.x”	Sub3 channel L_{max}
d20	“xxx.x”	Sub1 channel L_{min}	d52	“xxx.x”	Sub3 channel L_{min}
d21	“xxx.x”	Sub1 channel L_{N1}	d53	“xxx.x”	Sub3 channel L_{N1}
d22	“xxx.x”	Sub1 channel L_{N2}	d54	“xxx.x”	Sub3 channel L_{N2}
d23	“xxx.x”	Sub1 channel L_{N3}	d55	“xxx.x”	Sub3 channel L_{N3}
d24	“xxx.x”	Sub1 channel L_{N4}	d56	“xxx.x”	Sub3 channel L_{N4}
d25	“xxx.x”	Sub1 channel L_{N5}	d57	“xxx.x”	Sub3 channel L_{N5}
d26	“xxx.x”	Sub1 channel L_{peak}	d58	“xxx.x”	Sub3 channel L_{peak}
d27	“xxx.x”	Sub1 channel L_{leq}	d59	“xxx.x”	Sub3 channel L_{leq}
d28	“xxx.x”	Sub1 channel $L_{eq,mov}$	d60	“xxx.x”	Sub3 channel $L_{eq,mov}$
d29	“xxx.x”	Sub1 channel L_{tm5}	d61	“xxx.x”	Sub3 channel L_{tm5}
d30	“0”/“1”	Sub1 channel calculation Over	d62	“0”/“1”	Sub3 channel calculation Over
d31	“0”/“1”	Sub1 channel calculation Under	d63	“0”/“1”	Sub3 channel calculation Under

Remarks	There is no setting command.

DLC (only when the optional program NX-43RT is installed)				
Function	Final calculation result output			
Description	Simultaneously output the multiple calculation values of the last measurement.			
Request command	DLC?			
Response data	d0, d1, d2, ..., d*M*			
Return value	C1 (L_{eq})	d0	“xxx.x”	Main channel
		d1	“xxx.x”	Sub1 channel
		d2	“xxx.x”	Sub2 channel
		d3	“xxx.x”	Sub3 channel
		d4	“xxx.x”	Partial Overall (POA)
		d5	“xxx.x”	Band
		d6	“xxx.x”	Sub Band
		…	…	…
		…	“xxx.x”	Band*N*
	C2 (L_E)	…	Same as C1	…
	C3 (L_{max})	…	Same as C1	…
	C4 (L_{min})	…	Same as C1	…
	C5 (L_{N1})	…	Same as C1	…
	C6 (L_{N2})	…	Same as C1	…
	C7 (L_{N3})	…	Same as C1	…
	C8 (L_{N4})	…	Same as C1	…
	C9 (L_{N5})	…	Same as C1	…
	C10 ($L_{eq,mov}$)	…	Same as C1	…
	C11 (L_{peak})	…	“xxx.x”	Main channel
		…	“xxx.x”	Sub1 channel
		…	“xxx.x”	Sub2 channel
		…	“xxx.x”	Sub3 channel
	C12 (L_{leq})	…	Same as C11	…
	C13 (L_{tm5})	…	Same as C11	…
	C14(Measure Differential)	…	“xxx.x”	Measure Differential 1
		…	“xxx.x”	Measure Differential 2
	OV	…	“0”/“1”	Main channel calculation Over
		…	“0”/“1”	Sub1 channel calculation Over
		…	“0”/“1”	Sub2 channel calculation Over
		…	“0”/“1”	Sub3 channel calculation Over
		…	“0”/“1”	Band calculation Over
	UN	…	“0”/“1”	Main channel calculation Under
		…	“0”/“1”	Sub1 channel calculation Under
		…	“0”/“1”	Sub2 channel calculation Under
		d*M*	“0”/“1”	Sub3 channel calculation Under
Remarks	• There is no setting command. • *M* or *N* depends on analysis mode and frequency weighting characteristics. • Results are displayed from 16 Hz to 16 kHz for octave band analysis, and 12.5 Hz to 20 kHz for 1/3 octave band analysis.			

5.8 Examples of communication commands

Examples of settings with communication commands are shown below.
After setting, it is recommended to check the details of the settings with a request command.

Basic settings

Setting frequency weighting to “A”	Frequency␣Weighting, A
Setting time weighting to “F (Fast)”	Time␣Weighting, F

When using auto store

Setting the store mode to “Auto”	Store␣Mode, Auto
Setting the store name to “0100”	Store␣Name, 0100
Setting the total measurement time to “10m”	Measurement␣Time␣Preset␣Auto, 10m
Setting the Lp store interval to “100ms”	Lp␣Store␣Interval, 100ms
Setting Leq calculation interval to “1m”	Leq␣Calculation␣Interval␣Preset, 1m
Starting/stopping measurement (saves)	Measure, Start *There is no overwrite confirmation. Measure, Stop
Acquiring the measurement value	DOD?

When using manual store

Setting the store mode to “Manual”	Store␣Mode, Manual
Setting the store name to “0200”	Store␣Name, 0200
Setting the measurement time to “15m”	Measurement␣Time␣Preset␣Manual, 15m
Starting/stopping measurement	Measure, Start * There is no overwrite confirmation. Messages are not displayed during communication, and priority is given to executing the function of the said command. Measure, Stop
Saving the storage result	Manual␣Store, Start
Acquiring the measurement value	DOD?

* The symbol “␣” means a space.

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