Sound Level Meter class1 NL-52 Sound Level Meter class2 NL-42





# **Measure Sounds Reliably**



## Extremely user friendly ! Rion's NL-52 and NL-42 sound level meters provide full support for the measurement process.

250 mm

9.85 inch

SOUND LEVEL METER NL-52

> 98% .....

> > 130

10min 0d 00:00:00 Leg 10min 000001

90 110

520.

response for ACOUT Z

PAUSE/CONT

70

SEM

30

WS None Auto Lp 100ms

50

\_AF

Freq.

START/STOP

The NL-52 and NL-42 were developed to eliminate the trouble of reading instruction manuals when conducting measurements. Large and easily viewable three-inch LCD color display. The unit (except for the microphone) is water-resistant, which means that it is unaffected by sudden rain showers. You can use rechargeable batteries to help cut down on waste, making this an environmentally friendly product.

\* 025

Equipped with non-slip rubber grips

## Large color LCD screen

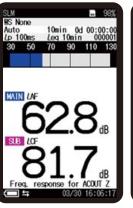
Three-inch LCD screen with a touch panel High resolution screen is easy to see indoors or outdoors and even in the dark.

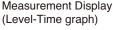


## No paper manual is needed.

User instructions and a help function can be easily accessed on the device.







Measurement Display (Simultaneous display of Main and Sub channel)

## Water-resistant (Except for the microphone)

Guaranteed water-resistant to at least level IP54 (resistant to spraying water). Helps reduce failures caused by sudden rain showers.



Parameter Screen Menu screen Help screen

10min 0d 00:00:23 Leg 10min 000002

90 110 130

5dB

.3ª

2<sub>dB</sub>

dF

6.8dB

luto p 100m

LAeg

/ AFmax

LCpeak

LAF05 /AF50

> Freq

50 70 MEN

System (Language)

Store

Option

elp 🗇 Display

Display

Recal

1/0

Save / Print

₩R

Back ⇔ 💵

Τ

Displa

HELP

language and the

the

Back ⇒ Display

elp 🗢 Display

1/0

Print

Back ⇒ 00

## Use of rechargeable batteries

In these models it is possible to use rechargeable batteries which make these meters environmentally-friendly. 24 hour continuous measurement is possible (when using eneloop<sup>®</sup> or dry alkaline batteries).



Please use the dedicated charger to charged eneloop® batteries

- When using eneloop batteries, please read the eneloop<sup>®</sup> battery instruction manual
   eneloop<sup>®</sup> is a registered trademark of Panasonic group.

## Continuous detailed measurements for one month

This meter can be used to conduct long-term measurements, such as environmental measurements. (If an AC adapter is used)

Duration of recording NL-52/42

1000 h (approx. one month)

Example of detailed recording

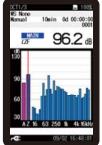
Previous model

200 h (approx. one week) 

If the  $L_p$  is measured at 100 ms intervals and the  $L_{eq}$  is simultaneously measured at 10 min intervals over a 24 h period, the total size of accumulated data is approximately 74 MB (reference value)

## Functionality can be extended by a range of options

Additional functions can be added, such as simultaneous logging of raw data (100 ms  $L_p$ ) and processed data(Leq and other indices), frequency analysis reverberation time measurement and long-term data recording.



1/3 octave band analysis screen



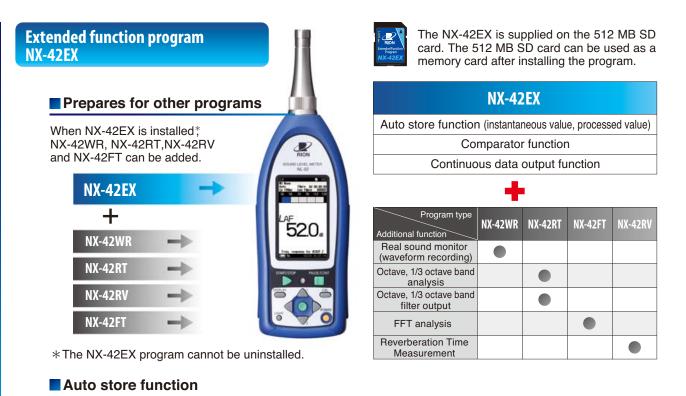


FFT analysis screen (x40)

Data management screen of AS-60 software

## **Optional program function list**

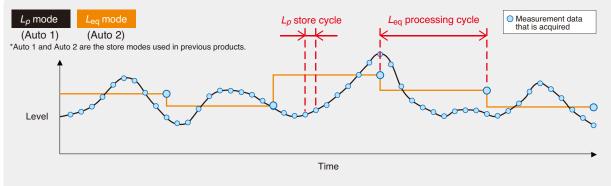
When the optional programs are installed, the following functions are added:



This function enables continuous measurement in  $L_p$  mode (instantaneous SPL) and  $L_{eq}$  mode (equivalent continuous SPL) to be conducted simultaneously.

Total measuring time of Auto store function Up to 1 000 h Equipped with a timer function

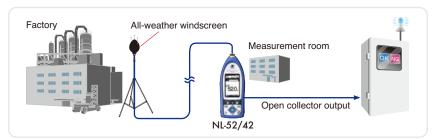
Lp mode (instantaneous SPL) and Leq mode (equivalent continuous SPL) concept





### Comparator function

This function turns on when the open collector output exceeds the set value (max. applied voltage 24 V, max. current 60 mA, allowable dissipation 300 mW).



### Continuous data output function

This function enables the continuous acquisition of instantaneous values and processed values during both USB and RS-232C communication.

This is a convenient function for users who can design their own control programs, where data has to be transferred continuously from the sound level meter to the computer.

### Waveform recording program NX-42WR



Octave,

NX-42RT

The NX-42RT is supplied on the 512 MB SD card. The 512 MB SD card can be used as a memory card after installing the program. G trial version now available on our website

The NX-42WR is supplied on the 2 GB SD card. The 2 GB SD card can be used as a memory card after installing the program.

1/3 octave real-time

analysis program

This function enables users to record sounds and to process sound levels simultaneously. Recorded data can be played on computer and used for frequency analysis.

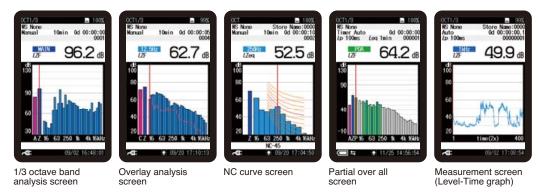
(Uncompressed waveform WAVE file)

Sampling at 48 kHz, 24 kHz, 12 kHz, Selection of 24 bit or 16 bit

Maximum re	ecording time	(16 bit)
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0 (	,		
Memory card Sampling frequency	512 MB	2 GB	32 GB
48 kHz	1 h	4 h	79 h
24 kHz	2 h	9 h	158 h
12 kHz	4 h	18 h	315 h

By adding the NX-42RT program to the NL-52/NL-42, octave band and 1/3 octave band analysis can be performed. Saved analysis results can be loaded and shown in an overlay graph display together with current analysis data. NC curve graph display and NC value calculation/display are also possible. Using the AS-60RT software, data can be utilized and managed on a computer.



### Reverberation Time Measurement Program NX-42RV



The NX-42RV is supplied on the 512 MB SD card. The 512 MB SD card can be used as a memory card after installing the program. By adding the NX-42RV program to the NL-52/42, reverberation time measurements can be performed. The measurement method is the interrupted noise method. This program allows storage of reverberation time decay curves, T20/T30 calculation, Txx calculation (reverberation time calculation based on a user-defined interval) and averaged reverberation time results displayed on the SLM screen.



FFT analysis program NX-42FT



The NX-42FT is supplied on the 512 MB SD card. The 512 MB SD card can be used as a memory card after installing the program.



By adding the NX-42FT program to the NL-52/NL-42, FFT analysis can be performed. The analysis frequency range is 20 kHz, with 8 000 spectrum lines (200 displayed). Saved analysis results can be loaded and shown in an overlay graph display together with current analysis data. Maximum zoom ratio is x40, and the top list screen can show up to 20 lines.

WS-10 Monual 20s 0d 00:00:20 Hanning 003	P31         P31           R5-10         20s         0d         00:00:20           Harming         002         002         002           INST (2)         73.5 dB         dB	WIN 02 1	R5-10 Mornual 20s 0d 00:00:20 Herming 000	WS-10 Manual 20s Hanning	0d 00:0
EXE         97.7 dB           60	Track (0) 73.5 dB	2.5 Her(ts) 2000 ( Freq. response for AC 001 Z • 072 = • 072 1038155	Zes PG.9 dB		65.6 65.0 64.8 64.4 64.2 64.0 63.8 63.8 63.8

Analysis screen (x1)

een (x1) Analysis screen (x40)

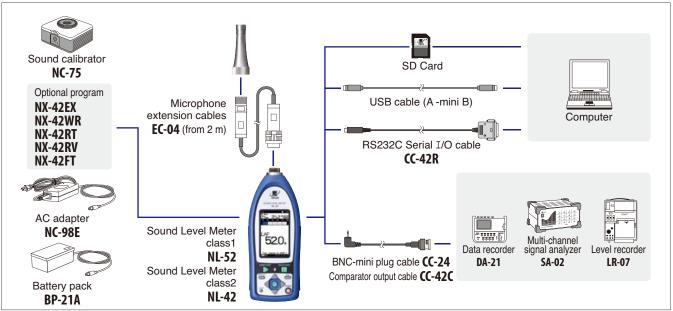
(40) Overlay analysis screen

Linear average screen

Top list screen

88888888

### System construction



### **Peripheral devices**

All-weather windscreen **WS-15** 



This windscreen is designed for outdoor installations. It helps to reduce wind noise and is equipped with rainproof features that satisfy the IPX3 water-resistant specifications. It is used with a microphone extension cable. (Mounting adapter WS15006 required separately) (For All-weather windscreen WS-15, use of ST-81 is recommended.)



**Rain-protection windscreen** 

This screen protects the microphone against rain for a short period of time. The rainproof performance of this windscreen is designed to satisfy the IPX3 water-resistant specifications

### Sound calibrator NC-75



This Sound calibrator conforms to IEC 60942 (JIS C 1515), class 1, providing a level of performance sufficient for calibrating the precision sound level meter.

Specifications	
Nominal acoustic pressure level	94 dB
Nominal frequency	1 kHz

Specifications



**PISTONPHONE** 

**NC-72A** 

Compliant with JIS C 1515: 2020 (IEC 60942: 2017) class LS/M, class 1/M Allows calibration with accuracy of ± 0.10 dB.

Specifications	
Nominal acoustic pressure level	114 dB
Nominal frequency	250 Hz



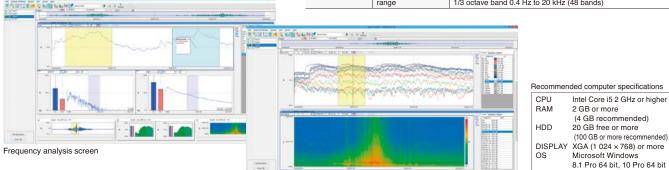
Tripod

This stand can be used for general acoustic measurements. The sound level meter and microphone can be mounted on the stand.

## Waveform analysis software AS-70

This software allows you to load stored WAVE files from a RION sound level meter, vibration meter or data recorder. Octave, 1/3 octave, and FFT analyses can then be performed. Playback of the real sound files is also possible.

Waveform analysis	Calculations	Maximum value, Minimum value, Average value, RMS, Variance,
		Differential and integral calculus, HPF, LPF
Frequency weighting		Z, A, C, G, C to A, L <sub>v</sub> (vertical) (JIS C 1510), L <sub>v</sub> (horizontal) (JIS C 1510)
FFT analysis	Analysis points	32 to 65 536 points
	Display data	Power spectrum, Power spectral density, Spectrogram
Time weighting		10 ms, F, 630 ms, S, 10 s
Octave band	Applicable standards	IEC 61260 Class 1 (JIS C 1514 Class 1)
analysis Analysis frequency		Octave band 0.5 Hz to 16 kHz (16 bands)
	range	1/3 octave band 0.4 Hz to 20 kHz (48 bands)



Frequency analysis screen

## **Complete software for environmental measurements**



## Data management software for environmental measurement AS-60

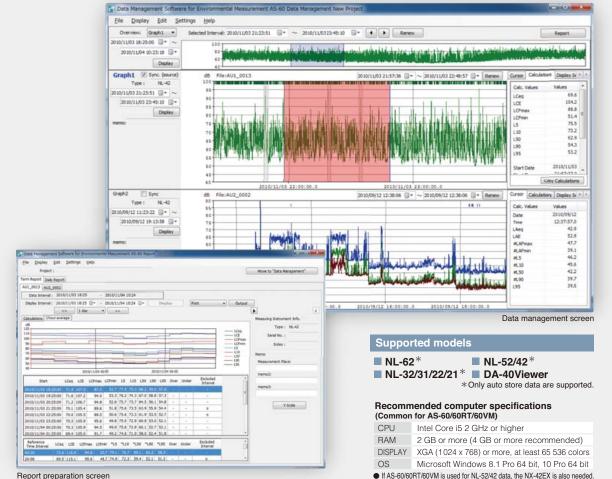
Data management software for environmental measurement AS-60 enables the graph display of measurement data, arithmetic processing, excluded sound processing, preparation of reports, output of files, and playback of real sound files.

Easy to use

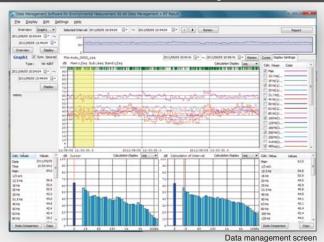
Reports easy to prepare

Simultaneous display of multiple Data stored in a data recorder can Data combination data items (up to 8 data items)

be loaded (CSV file for DA-40 Viewer)



Data management software for environmental measurement AS-60RT (Includes the octave and 1/3 octave data management software)



#### Adds support for handling octave band analysis data to AS-60

AS-60RT is for managing NX-62RT/42RT or NA-28 data on a computer.

#### Supported models

SX-A1RT\* NX-42RT\*

NX-62RT\* **NA-28**\* \*Only auto store data are supported.

Data management software for environmental measurement AS-60VM (Includes the vibration level data management software)

#### Adds support for handling data measured with VM-55EX/53A to AS-60

#### Supported models

VM-55EX\*

VM-53A\* \* Only auto store data are supported.

		А	A		
Spe	ecification	S 🔚			
-					
		NL-52 🔯	NL-42 🔯		
Applic	cable standards	IEC 61672-1: 2013/2002 class 1	IEC 61672-1: 2013/2002 class 2		
		ANSI/ASA S1.4-2014/Part1 class 1	ANSI/ASA S1.4-2014/Part2 class 2		
		JIS C 1509-1: 2017 class 1	JIS C 1509-1: 2017 class 2		
		CE marking	vport model for Ching only)		
Measi	urement functions	WEEE Directives, Chinese RoHS (ex Simultaneous measurement of the for			
modo		weighting and frequency weighting			
Pro	ocessing (main ch		Lp		
		Equivalent continuous sound pressu	re level: L <sub>eq</sub>		
		Sound exposure level: LE			
		Maximum sound pressure level: Lmax	ĸ		
		Minimum sound pressure level: L <sub>min</sub>			
Bro	accessing (sub ab)		9 %, 0.1-increment steps, max. 5 values)		
	ocessing (sub ch) ditional processing	Instantaneous sound pressure level:	one of the following can be selected		
	processing	for simultaneous processing:			
		C-weighted equivalent continuous so	ound level: LCeq		
		C-weighted peak sound level: LCpeak			
		Z-weighted peak sound level: Lzpeak			
		I-time-weighted equivalent continuous s			
		Maximum I-time-weighted equivalent co			
		The power average of the maximum lev			
		The frequency weighting for the additional processing synchronizes with the frequency weighting of the sub-channel, so when the sub-channel has A-weighting, L <sub>Atm5</sub> can be selected.			
		When C-weighting (Z-weighting ) is selected			
		(Lzpeak) are selectable.			
Microph	hone Type	UC-59	UC-52		
	Sensitivity lev	el -27 dB	-33 dB		
Measu	urement range	A-weighting: 25 dB to 138 dB			
		C-weighting: 33 dB to 138 dB			
		Z-weighting: 38 dB to 138 dB			
		C-weighting peak sound level: 55 dB Z-weighting peak sound level: 60 dB			
Inhere	ent A-weighting	17 dB or less	19 dB or less		
noise		25 dB or less	27 dB or less		
	Z-weighting	30 dB or less	32 dB or less		
Frequ	iency range	10 Hz to 20 kHz	20 Hz to 8 kHz		
Frequency weighting			A, C, and Z		
	ency weighting	A, C, and Z			
Time v	ency weighting weighting	A, C, and Z F (Fast) and S (Slow)			
Time v Level	iency weighting weighting range	A, C, and Z F (Fast) and S (Slow) Single range (Linearity range: 113 dB	3)		
Time v Level Bar	iency weighting weighting range graph display range m	A, C, and Z F (Fast) and S (Slow) Single range (Linearity range: 113 df ax Max. 110 dB (20 to 130 dB)			
Time V Level Bar Swit	iency weighting weighting range graph display range m tching of bar graph disp	A, C, and Z F (Fast) and S (Slow) Single range (Linearity range: 113 df ax Max. 110 dB (20 to 130 dB) ay Set the upper/ lower limit in 10 dB in			
Time v Level Bar Swit RMS o	iency weighting weighting range graph display range m	A, C, and Z         F (Fast) and S (Slow)         Single range (Linearity range: 113 df         ax Max. 110 dB (20 to 130 dB)         ay Set the upper/lower limit in 10 dB in-         Digital processing method	crements.		
Time v Level Bar Swit RMS o	ency weighting weighting range graph display range m tching of bar graph disp detection circuit	A, C, and Z F (Fast) and S (Slow) Single range (Linearity range: 113 df ax Max. 110 dB (20 to 130 dB) ay Set the upper/ lower limit in 10 dB in	crements.		
Time v Level Bar Swit RMS o Sampl	ency weighting weighting range graph display range m tching of bar graph disp detection circuit ling cycle	A, C, and Z F (Fast) and S (Slow) Single range (Linearity range: 113 df ax Max. 110 dB (20 to 130 dB) ay Set the upper/ lower limit in 10 dB in Digital processing method 20.8 µs (Lp, Leq, LE, Lmax, Lmin, Lpeak 100 ms (L <sub>N</sub> )	crements.		
Time v Level Bar Swit RMS o Sampl Calibra	ency weighting range graph display range m tching of bar graph disp detection circuit ling cycle ration	A, C, and Z     F (Fast) and S (Slow)     Single range (Linearity range: 113 dB     ax Max. 110 dB (20 to 130 dB)     ay Set the upper/ lower limit in 10 dB in     Digital processing method     20.8 µs (L,p, Leq, LE, Lmax, Lmin, Lpeak     100 ms (L/N)     Electrical calibration performed accool     internally generated signals: acoustice	crements. : : sampling frequency: 48 kHz)		
Time v Level Bar Swit RMS o Sampl Calibra	ency weighting weighting range graph display range m tching of bar graph disp detection circuit ling cycle	A, C, and Z     F (Fast) and S (Slow)     Single range (Linearity range: 113 dB     ax Max. 110 dB (20 to 130 dB)     ay Set the upper/ lower limit in 10 dB in     Digital processing method     20.8 µs (Lp. Leq. LE, Lmax, Lmin, Lpeak     100 ms (LN)     Electrical calibration performed accool     internally generated signals: acoustic     Windscreen correction:	crements. : sampling frequency: 48 kHz) rding to IEC and JIS standards, using c calibration performed with the NC-75.		
Time v Level Bar Swit RMS o Sampl Calibra	ency weighting range graph display range m tching of bar graph disp detection circuit ling cycle ration	A, C, and Z         F (Fast) and S (Slow)         Single range (Linearity range: 113 dB         ax       Max. 110 dB (20 to 130 dB)         ay       Set the upper/lower limit in 10 dB in         Digital processing method       20.8 µS (LP, Leq, LE, Lmax, Lmin, Lpeat         100 ms (LN)       Electrical calibration performed accool         internally generated signals: acoustic       Windscreen correction:         Compliant with IEC 61672-1 and JIS C 1508	crements. : sampling frequency: 48 kHz) rding to IEC and JIS standards, using		
Time v Level Bar Swit RMS o Sampl Calibra	ency weighting range graph display range m tching of bar graph disp detection circuit ling cycle ration	A, C, and Z     F (Fast) and S (Slow)     Single range (Linearity range: 113 df     ax Max. 110 dB (20 to 130 dB)     ay Set the upper/ lower limit in 10 dB in     Digital processing method     20.8 µs (Lp, Leq, LE, Lmax, Lmin, Lpeak     100 ms (Ln)     Electrical calibration performed accool     internally generated signals: acoustic     Windscreen correction:     Compliant with IEC 61672-1 and JIS C 1500     Diffuse sound field correction:	crements. : sampling frequency: 48 kHz) rding to IEC and JIS standards, using calibration performed with the NC-75. P-1 standards when the windscreen is installed.		
Time v Level Bar Swit RMS o Sampl Calibra	ency weighting range graph display range m tching of bar graph disp detection circuit ling cycle ration	A, C, and Z     F (Fast) and S (Slow)     Single range (Linearity range: 113 df     ax Max. 110 dB (20 to 130 dB)     ay Set the upper/ lower limit in 10 dB im     Digital processing method     20.8 µs (L <sub>P</sub> , Leq, LE, Lmax, Lmin, Lpeak     100 ms (L <sub>N</sub> )     Electrical calibration performed accod     internally generated signals: accustit     Windscreen correction:     Compliant with IEC 61672-1 and JIS C 1508     Diffuse sound field correction:     Correction of frequency characteristi	crements. : sampling frequency: 48 kHz) rding to IEC and JIS standards, using calibration performed with the NC-75. P-1 standards when the windscreen is installed.		
Time v Level Bar Swit RMS o Sampl Calibra	ency weighting weighting range graph display range m tching of bar graph disp detection circuit ling cycle ration ction functions	A, C, and Z     F (Fast) and S (Slow)     Single range (Linearity range: 113 df ax Max. 110 dB (20 to 130 dB)     ay Set the upper/ lower limit in 10 dB in     Digital processing method     20.8 µs (Le, Leq, LE, Lmax, Lmin, Lpeak     100 ms (LN)     Electrical calibration performed acco     internally generated signals: acoustic     Windscreen correction:     Compliant with IEC 61672-1 and JIS C 1500     Diffuse sound field correction:     Correction of frequency characteristii     (ANSI S1.4) in diffuse sound field.	crements. : sampling frequency: 48 kHz) rding to IEC and JIS standards, using calibration performed with the NC-75. P-1 standards when the windscreen is installed. cs in order to comply with standards		
Time v Level Bar Swit RMS o Sampl Calibra	ency weighting weighting range graph display range m tching of bar graph disp detection circuit ling cycle ration ction functions	A, C, and Z     F (Fast) and S (Slow)     Single range (Linearity range: 113 df     ax Max. 110 dB (20 to 130 dB)     ay Set the upper/ lower limit in 10 dB in     Digital processing method     20.8 µs (L,P, Leq, LE, Lmax, Lmin, Lpeak     100 ms (L/N)     Electrical calibration performed acco     internally generated signals: acoustic     Windscreen correction:     Compliant with IEC 61672-1 and JIS C 1500     Diffuse sound field correction:     Correction of frequency characteristit     (ANSI S1.4) in diffuse sound field.     The meter can be set to start measurin	crements. : sampling frequency: 48 kHz) rding to IEC and JIS standards, using calibration performed with the NC-75. P-1 standards when the windscreen is installed.		
Time v Level Bar Swit RMS o Sampl Calibra Correc	ency weighting weighting range graph display range m tching of bar graph disp detection circuit ling cycle ration ction functions	A, C, and Z     F (Fast) and S (Slow)     Single range (Linearity range: 113 df     ax Max. 110 dB (20 to 130 dB)     ay Set the upper/ lower limit in 10 dB in     Digital processing method     20.8 µs (L,P, Leq, LE, Lmax, Lmin, Lpeak     100 ms (L/N)     Electrical calibration performed acco     internally generated signals: acoustic     Windscreen correction:     Compliant with IEC 61672-1 and JIS C 1500     Diffuse sound field correction:     Correction of frequency characteristit     (ANSI S1.4) in diffuse sound field.     The meter can be set to start measurin	crements. : sampling frequency: 48 kHz) rding to IEC and JIS standards, using c calibration performed with the NC-75. -1 standards when the windscreen is installed. cs in order to comply with standards ing a specified time (OFF, 1, 3, 5 or 10 s) d or when a user-set trigger is exceeded.		
Time v Level Bar Swit RMS 6 Sampl Calibra Calibra Correc	ency weighting weighting range graph display range m tching of bar graph disp detection circuit ding cycle ration ction functions	A, C, and Z F (Fast) and S (Slow) Single range (Linearity range: 113 df ax Max. 110 dB (20 to 130 dB) ay Set the upper/ lower limit in 10 dB im Digital processing method 20.8 µs ( <i>L</i> , <i>p</i> , <i>L</i> <sub>eq</sub> , <i>L</i> <sub>E</sub> , <i>L</i> <sub>max</sub> , <i>L</i> <sub>min</sub> , <i>L</i> <sub>peak</sub> 100 ms ( <i>L</i> <sub>N</sub> ) Electrical calibration performed accodint internally generated signals: acoustic Windscreen correction: Complaint with IEC 61672-1 and JIS C 1500 Diffuse sound field correction: Correction of frequency characteristi (ANSI S1.4) in diffuse sound field. The meter can be set to start measurin after the start button has been presse When the PAUSE key is pressed to j (user selectable) 0, 1, 3 or 5 s data a	crements. :: sampling frequency: 48 kHz) rding to IEC and JIS standards, using : calibration performed with the NC-75. P-1 standards when the windscreen is installed. cs in order to comply with standards ig a specified time (OFF, 1, 3, 5 or 10 s) d or when a user-set trigger is exceeded. pause measurement, the preceding tre excluded from processing.		
Time v Level Bar Swit RMS 6 Sampl Calibra Calibra Correc	ency weighting weighting range graph display range m tching of bar graph disp detection circuit ding cycle ration ction functions	A, C, and Z     F (Fast) and S (Slow)     Single range (Linearity range: 113 df     ax Max. 110 dB (20 to 130 dB)     ay Set the upper/ lower limit in 10 dB im     Digital processing method     20.8 µs (L <sub>P</sub> , Leq, LE, Lmax, Lmin, Lpeat     100 ms (L <sub>N</sub> )     Electrical calibration performed acco     internally generated signals: accustit     Windscreen correction:     Compliant with IEC 61672-1 and JIS C 1500     Diffuse sound field correction:     Correction of frequency characteristi     (ANSI S1.4) in diffuse sound field.     The meter can be set to start measurir     after the start button has been presse     When the PAUSE key is pressed to p     (user selectable) 0, 1, 3 or 5 s data a     Backlit semitransparent color TFT LC	crements. :: sampling frequency: 48 kHz) rding to IEC and JIS standards, using c calibration performed with the NC-75. P-1 standards when the windscreen is installed. ccs in order to comply with standards ing a specified time (OFF, 1, 3, 5 or 10 s) d or when a user-set trigger is exceeded. sause measurement, the proceeding ure excluded from processing. 2D display WQVGA (400 x 240 dots)		
Time v Level Bar Swit RMS 6 Sampl Calibra Calibra Correc	ency weighting weighting range graph display range m tching of bar graph disp detection circuit ding cycle ration ction functions	A, C, and Z         F (Fast) and S (Slow)         Single range (Linearity range: 113 df         ax Max. 110 dB (20 to 130 dB)         ay Set the upper/ lower limit in 10 dB in         Digital processing method         20.8 µs (Le, Leq, LE, Lmax, Lmin, Lpeak         100 ms (LN)         Electrical calibration performed acco         internally generated signals: acoustic         Windscreen correction:         Correction of frequency characteristi         (ANSI S1.4) in diffuse sound field.         The meter can be set to start measurir         after the start button has been presse         When the PAUSE key is pressed to pressed to presse         (user selectable) 0, 1, 3 or 5 s data a         Backlit semitransparent color TFT LC         *LCD with touch panel (Capacitive)	crements. : sampling frequency: 48 kHz) rding to IEC and JIS standards, using c calibration performed with the NC-75. P-1 standards when the windscreen is installed. cs in order to comply with standards ug a specified time (OFF, 1, 3, 5 or 10 s) d or when a user-set trigger is exceeded. bause measurement, the preceding tre excluded from processing. D display WQVGA (400 x 240 dots) Touch Panel)		
Time v Velavel Bar Swit Swit Sampl Calibra Calibra Correc Delay Back c	ency weighting weighting range graph display range m tching of bar graph disp detection circuit ling cycle ration ction functions time erase function ay	A, C, and Z F (Fast) and S (Slow) Single range (Linearity range: 113 df ax Max. 110 dB (20 to 130 dB) ay Set the upper/ lower limit in 10 dB in Digital processing method 20.8 µs (Le, Leq, LE, Lmax, Lmin, Lpeak 100 ms (LN) Electrical calibration performed acco internally generated signals: acoustic Windscreen correction: Compliant with IEC 61672-1 and JIS C 1500 Diffuse sound field correction: Correction of frequency characteristi (ANSI S1.4) in diffuse sound field. The meter can be set to start measurir after the start button has been presse When the PAUSE key is pressed to [ (user selectable) 0, 1, 3 or 5 s data ac Backlit semitransparent color TFT LC * LCD with touch panel (Capacitive Numerical display update frequency: 1 s	crements. : sampling frequency: 48 kHz) rding to IEC and JIS standards, using c calibration performed with the NC-75. P-1 standards when the windscreen is installed. cs in order to comply with standards ng a specified time (OFF, 1, 3, 5 or 10 s) d or when a user-set trigger is exceeded. Dause measurement, the preceding ure excluded from processing. D display WQVGA (400 x 240 dots) Touch Panel) Bar graph update frequency: 100 ms		
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Time v Velavel Bar Swit Swit Sampl Calibra Calibra Correc Delay Back c	An ency weighting weighting range graph display range m tabing of bar graph disp detection circuit ding cycle ration ction functions time erase function ay Manual	A, C, and Z F (Fast) and S (Slow) Single range (Linearity range: 113 df ax Max. 110 dB (20 to 130 dB) ay Set the upper/ lower limit in 10 dB im Digital processing method 20.8 µS ( <i>Lp</i> , <i>Leq</i> , <i>LE</i> , <i>Lmax</i> , <i>Lmin</i> , <i>Lpeal</i> 100 ms ( <i>Lp</i> ) Electrical calibration performed acco internally generated signals: acoustic Windscreen correction: Compliant with IEC 61672-1 and JIS C 1500 Diffuse sound field correction: Correction of frequency characteristi (ANSI S1.4) in diffuse sound field. The meter can be set to start measurinr after the start button has been presses When the PAUSE key is pressed to p (user selectable) 0, 1, 3 or 5 s data a Backlit semitransparent color TFT LC * LCD with touch panel (Capacitive Numerical display update frequency: 15 Data for measurement results are store	crements. :: sampling frequency: 48 kHz) rding to IEC and JIS standards, using : calibration performed with the NC-75. 9-1 standards when the windscreen is installed. cs in order to comply with standards ing a specified time (OFF, 1, 3, 5 or 10 s) d or when a user-set trigger is exceeded. bause measurement, the preceding the excluded from processing. D display WQVGA (400 x 240 dots) Touch Panel) Bar graph update frequency: 100 ms ad manually in single address increments. f the SD Card*1		
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Time vel Level Bar Swit RMS & Sampl Calibra Calibra Delay Back & Displa	ency weighting weighting range graph display range m thing of bar graph disp detection circuit ding cycle ration ction functions r time erase function ay Manual Number of data Auto*2 Le sampling cyce	<ul> <li>A, C, and Z</li> <li>F (Fast) and S (Slow)</li> <li>Single range (Linearity range: 113 df ax Max. 110 dB (20 to 130 dB)</li> <li>ax Max. 110 dB (20 to 130 dB)</li> <li>ay Set the upper/ lower limit in 10 dB im Digital processing method</li> <li>20.8 μs (<i>L</i>,<i>p</i>, <i>L</i><sub>eq</sub>, <i>L</i>, <i>E</i>, <i>L</i>max, <i>L</i>min, <i>L</i>peah 100 ms (<i>L</i>,<i>n</i>)</li> <li>Electrical calibration performed acco internally generated signals: acoustic Windscreen correction:</li> <li>Correction of frequency characteristi (ANSI S1.4) in diffuse sound field correction:</li> <li>Correction of frequency characteristi (ANSI S1.4) in diffuse sound field.</li> <li>The meter can be set to start measurinr after the start button has been presses</li> <li>When the PAUSE key is pressed to g (user selectable) 0, 1, 3 or 5 s data a</li> <li>Backlit semitransparent color TFT LC * LCD with touch panel (Capacitive Numerical display update frequency: 1</li> <li>Data for measurement results are store a Internal memory: max. 1000 sets SD Card: depends on the capacity of Instantaneous values (<i>L</i>,<i>p</i> mode) and stored continuously and automaticall</li> <li>100 ms, 200 ms, 1 s, <i>L</i><sub>eq</sub> 1s</li> </ul>	crements.  crements.		

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Data	a recall		Allows viewing of stored data		
Setup memory		iory	Up to five setup configurations can be saved in internal memory, for later re-		
			Start up via file settings previously stored on SD card possible		
Waveform recording *3		cording * 3			
F	ile forn	nat	Uncompressed waveform WAVE file		
S	ampling	frequency	Select 48 kHz, 24 kHz or 12 kHz		
D	Data ler	ngth	Select 24 bit or 16 bit		
Outputs DC output		output	Output DC signals using a frequency weighting characteristic selected by processing		
	C	utput voltage	2.5 V, 25 mV / dB at bar graph display full scale		
	AC	output	Output AC signals using a frequency weighting characteristic selected by		
			processing or by A, C, Z-weighting.		
	C	utput voltage	1 V (rms values) at bar graph display full scale		
	Con	nparator	Turns on when the open-collector output exceeds the set value		
	outp	out*2	(max. applied voltage 24 V, max. current 60 mA, allowable dissipation 300 mW)		
USB	3		Allows USB to be connected to a computer and recognized as a removable dis		
			Allows USB to be controlled via communication commands		
RS-2	232C c	ommunication	Allows for RS-232C communication via use of a dedicated cable		
Data	contin	uous output*2			
T	ype of	Instantaneous value	Lp		
d	lata	Processed value	Leg, Lmax, Lmin, Lpeak		
0	Dutput i	nterval	100 ms		
Powe	er requ	irements	Four IEC R6 (size AA) batteries (alkaline or rechargeable batteries) or external power supply		
В	Battery	life (23 °C)	Alkaline battery LR6 (AA): 26 h Ni-MH secondary battery: 25 h		
			At the maximum * Depends on the setting		
A	C ada	pter	NC-98E		
E	xterna	power voltage	5 to 7 V (rated voltage: 6 V)		
С	Current	consumption	Approximately 90 mA (normal operation, rated voltage)		
Ambi	ient	Temperature	-10 to +50 °C		
condi	litions	Humidity	10 to 90 % RH (non-condensing)		
Dust	proof /	water-resistant	IP code: IP54 (except for microphone)		
	ormance		See precautions regarding waterproofing		
Dime	ensions	s, weight	ight Approx. 250 (H) x 76 (W) x 33 mm(D), approx. 400 g (with batteries)		
Supp	plied ad	ccessories	Storage case x 1, Windscreen WS-10 x 1, Windscreen fall prevention rubber x 1,		
			Hand strap x 1, LR6 (AA) alkaline batteries x 4, SD card 512 MB×1 (NX-42EX		
			preinstalled model only)		

#### Options

Product name	Product number
Extended function program (Inst.on 512 MB SD card)	NX-42EX
Waveform recording program*2 (Inst.on 2 GB SD card)	NX-42WR
Octave, 1/3 octave real-time analysis program *2 (Inst.on 512 MB SD card)	NX-42RT
Reverberation time measurement program*2 (Inst.on 512 MB SD card)	NX-42RV
FFT analysis program*2 (Inst.on 512 MB SD card)	NX-42FT
Data management software for environmental measurement	AS-60
Data management software for environmental measurement (Includes the octave and 1/3 octave data management software)	AS-60RT
Data management software for environmental measurement (Includes the vibration level data management software)	AS-60VM
Waveform analysis software	AS-70
SD Card 512 MB	MC-51SD1
SD Card 2 GB	MC-20SD2
SD Card 32 GB	MC-32SP3
AC adapter (100 V to 240 V)	NC-98E
Battery pack	BP-21A
Microphone extension cables	EC-04 (from 2 m)
BNC-Pin output code	CC-24
Comparator output cable	CC-42C
RS 232C serial I/O cable	CC-42R
USB cable	Generic USB cable can be used
Sound calibrator	NC-75
All-weather windscreen	WS-15
Windscreen mounting adapter	WS-15006
Rain-protection windscreen	WS-16
Sound level meter tripod	ST-80
All-weather windscreen tripod	ST-81

\*1 Use Rion fully guaranteed products. \*2 NX-42EX required (sold separately). \*3 NX-42WR required (sold separately). \*4 Protection against harmful dust and water splashing from any direction.

#### Precautions regarding waterproofin

Before use, verify that the rubber bottom cover and the battery compartment lid are firmly closed. To maintain the water and dust proof rating, internal packing replacement is required every two years (at cost).

To maintain the water and dust proof rating, internal packing replacement is required every two years (at cost)



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RION CO., LTD. is recognized by the JCSS which uses ISO/IEC 17025 as an accreditation standard and bases its accreditation scheme on ISO/IEC 17011. JCSS is operated by the accreditation body (IA Japan) which is a signatory to the Asia Pacific Accreditation Cooperation (APAC) as well as the International Laboratory Accreditation Cooperation (ILAC). The Quality Assurance Section of RION CO., LTD. is an international MRA compliant JCSS operator with the accreditation number JCSS 0197.



\* Windows is a trademark of Microsoft Corporation. \* Specifications subject to change without notice



 This product is environment-friendly. It does not include toxic chemicals on our policy.
 This product is certified to an International Protection rating of IP54 (dust protected and resistant to splashing water). This leaflet is printed with environmentally friendly UV ink.



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