



« Pour vos mesures acoustiques par tous types de temps ... »

Stations sonométriques *Série NL et NA-28*



Caractéristiques générales

- ✦ *Sonomètres conformes aux normes IEC 61672-1 : 2002 et IEC 61260 : 1995*
- ✦ *Mesures simultanées de valeurs instantanées et de profils de L_{eq} , L_{max} , L_{min} et 5 valeurs L_n de pourcentile*
- ✦ *Analyse en bandes d'octave ou de 1/3 d'octave*
- ✦ *Fonction de déclenchement automatique pour surveillance d'évènements inattendus*
- ✦ *Sauvegarde sur carte Compact Flash de grande capacité*
- ✦ *Evolutivité à l'aide de cartes programme vers :*
 - *L'enregistrement sonore*
 - *L'analyse FFT*
 - *L'analyse en 1/3 d'Octave*
- ✦ ***Transfert des données** par carte CF card ou par lien USB*
- ✦ *Autonomie de 24 à 34 heures en standard*
- ✦ ***Autonomie supérieure à 2 semaines avec batteries rechargeables***





Enregistrement de niveaux au cours du temps

Sonomètres NL 22/32

Fonctions standard

- ↳ Mesures des valeurs de L_p , L_{eq} , L_E , L_{max} , L_{min} et 5 valeurs L_n de pourcentiles
- ↳ 3 modes de stockage :
 - Manuel
 - L_p (100 ms, 200 ms ou 1 s) ou L_{Aeq} 1 s
 - L_p , L_{eq} , L_E , L_{max} , L_{min} et 5 valeurs L_n à des intervalles configurables
- ↳ Capacité de sauvegarde : 100 fichiers de 100 valeurs



Fonctions optionnelles

↳ Carte NX-22J

Ajoute au sonomètre la possibilité d'enregistrer le son. Enregistrement sur seuil ou par interval. Post-traitement en écoutant le signal avec le logiciel NL-22PB1. 11 heures d'enregistrement sur une carte 256 Mo.



Real sound monitor card
NX-22J

↳ Carte NX-22RT

Ajoute au sonomètre la possibilité d'acquérir 1/1 et 1/3 d'Octave en temps réel. Conformité IEC 61260: 1995 Classe 1. Spectre de L_p , L_{eq} , L_E et L_{max} au choix. 100 fichiers de 100 valeurs maximum. **Sauvegarde manuelle**



1/1, 1/3 Octave real-time analyzer card
NX-22RT

↳ Carte NX-22FT

Ajoute au sonomètre la possibilité d'analyser le son en bandes fines (FFT) en temps réel. Choix de fréquences : 2, 5, 10 ou 20 kHz. Fenêtrage rectangulaire ou Hanning. Résolution 400 lignes. Zoom : x2 et x 4. Moyennage instantané, linéaire ou maintien du maximum. 50 fichiers de 100 valeurs maximum. **Sauvegarde manuelle**

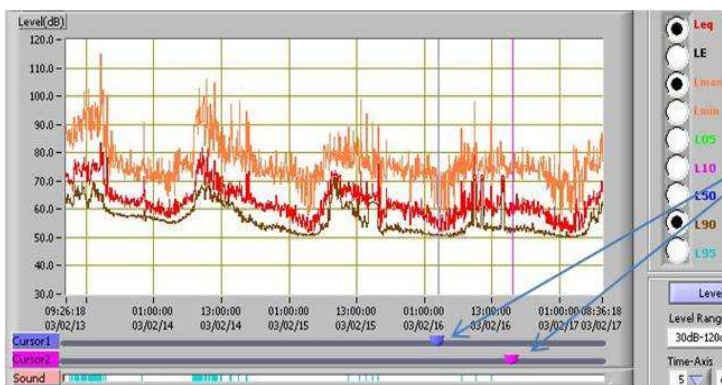


FFT Analyzer card
NX-22FT



Logiciel de gestion de données issues des sonomètres Série NL (Option)

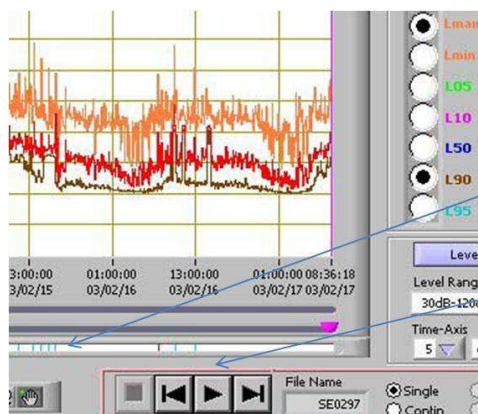
- ↳ Récupération des données sauvegardées par les sonomètres de la série NL
- ↳ Téléchargement des signaux enregistrés (avec la fonction NX-22J)
- ↳ Edition graphique des données
- ↳ Identification des signaux à l'aide de marqueurs
- ↳ Relecture en un clic de signaux à l'aide des haut-parleurs du PC
- ↳ Recalcul de n'importe quelles valeurs entre 2 curseurs
- ↳ Possibilité de zoom entre curseurs
- ↳ Possibilité de suppression d'évènements
- ↳ Mesures simultanées de valeurs instantanées et de profils de Leq, Lmax, Lmin et 5 valeurs Ln de pourcentile
- ↳ Fonction de déclenchement automatique pour surveillance d'évènements inattendus



Curseurs de début et de fin
de zoom/post-traitement

Valeurs recalculées sur
une période

Item	Leq	LE	Lmax	Lmin	L05	L10	L50	L90	L95
Section	67.5	-	115.1	49.1	67.8	65.3	59.1	56.4	55.8



Marqueurs d'enregistrements
sonores

Boutons de
relecture



Configurations Série NL

Kit intégré



Kit anti vent et anti pluie
avec adaptateur
WS-03-S01/WS-03-051



Malette étanche avec :
 ✓ 4 batteries 6 ou 12V, 12 Ahr rechargeables
 ✓ Mat métallique de 1,20 m
 ✓ Rallonge 2 m **EC-04**

Kit avec trépied



Kit anti vent et anti pluie
avec adaptateur
WS-03-S01/WS-03-051

Trépied hauteur max 2 m
ST-81



Rallonge de 2 à 100 mètres
EC-04x

Malette étanche avec 4 batteries 6 ou 12V,
12 Ahr rechargeables



4 Piles Alkaline LR6



Boule anti vent
WS-10



Carte Compact
Flash 128 Mo
MC-12CF1



Sonomètres
Série NL



Malette de rangement
NL-21-031



Manuel d'utilisation papier

Standard



Carte Compact Flash
256 Mo
MC-25CF1



Batterie externe
BP-21

Optionnel



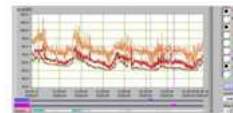
Adaptateur AC/DC
NC-98B



Calibreur Classe 1
NC-74



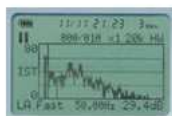
Valise étanche avec batteries
NL-KE



Logiciel pour gestion des
données **NL-22PB1**



Enregistrement sonore
NX-22J



Analyse FFT
NX-22FT



Analyse 1/3 Octave
NX-22RT



Enregistrement de niveaux au cours du temps en tiers d'octave Sonomètre NA-28

Fonctions standard

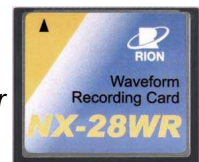
- ↳ Mesures des valeurs de L_p , L_{eq} , LE , L_{max} , L_{min} et 5 valeurs L_n de pourcentiles **par tiers d'octave**
- ↳ 5 modes de stockage basés sur une capacité de carte mémoire de 1 Go
 - Manuel : 100 fichiers de 1 000 set de données
 - Mode sonomètre : L_p , L_{eq} , L_{max} , L_{min} toutes les 100 ms pendant 1000 heures ou 300 000 valeurs de L_p, L_{eq} , L_{max} , L_{min} et 5 valeurs L_n à des intervalles à définir.
 - Mode analyseur : 10 000 valeurs de L_p par bande + global toutes les 1 ms ou 300 000 sets de valeurs L_p , L_{eq} , LE , L_{max} , L_{min} et 5 valeurs L_n par bande + global à des intervalles à définir



Fonctions optionnelles

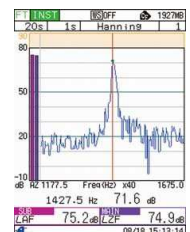
↳ Carte NX-28WR

Ajoute au sonomètre la possibilité d'enregistrer le son. Enregistrement sur seuil ou par intervalle. Post-traitement fréquentiel avec le logiciel DA-20PA1.



↳ Carte NX-28FT

Ajoute au sonomètre la possibilité d'analyser le son en bandes fines.





Configurations NA-28

Kit intégré



Kit anti vent et anti pluie
avec adaptateur
WS-03-S01/WS-03-051



Malette étanche avec 4 batteries 12V, 12 Ahr rechargeables, convertisseur DC/DC, mât métallique de 1,20 m, Rallonge 2 m **EC-04**

Kit avec trépied



Kit anti vent et anti pluie
avec adaptateur
WS-03-S01/WS-03-051

Trépied hauteur max 2 m
ST-81



Malette étanche avec 4 batteries 12V, 12 Ahr rechargeables et convertisseur DC/DC



Rallonge de 2 à 100 mètres
EC-04x



Boule anti vent
WS-10



4 Piles Alkaline LR14



Carte Compact
Flash 128 Mo
MC-12CF1



Sonomètre
NA-28



Malette de rangement



Manuel d'utilisation papier

Standard



Carte Compact Flash 1 Go
MC-10CF2



Carte Compact Flash 2 Go
MC-20CF2



Calibreur Classe 1
NC-74



Valise étanche avec batteries
NA-KE



Batterie externe
BP-21



Adaptateur AC/DC
NC-98B

Optionnel



Enregistrement sonore
NX-28WR



Analyse FFT
NX-28FT



Logiciel pour gestion
des données
NA-28PA1



Spécifications détaillées série NL

	NL-32	NL-31	NL-22	NL-21	NL-20
Applicable standards	High-Precision Sound Level Meter according to the following standards		General-Purpose Sound Level Meter according to the following standards		
	IEC 61672-1 : 2002 Class 1		IEC 61672-1 : 2002 Class 2		
	JIS C 1509-1 Class 1		JIS C 1509-1 Class 2		
Measurement functions (main processing)	Simultaneous measurement of all items, with selected time weighting and frequency weighting: Sound level L_p , equivalent continuous sound level L_{eq} , sound exposure level L_E , maximum sound level L_{max} , minimum sound level L_{min} , percentile sound level L_N (5 freely selectable values)				
Measurement functions (sub processing)	In addition to main processing items, one of the following can be selected for simultaneous processing: Peak sound level L_{peak} , C-weighted peak sound level L_{Cpeak} , C-weighted equivalent continuous sound level L_{Ceq} , power average of maximum sound level in a given interval L_{Aim5} , impulse sound level L_{Ai} , impulse equivalent continuous sound level L_{Aieg} <small>*L_{Aim5}, L_{Ai} and L_{Aieg} can only be chosen when A-weighting is selected for main processing. *L_{Ceq} can only be chosen when A-weighting and flat characteristics are selected for main processing.</small>				—
Measurement time	10 seconds, 1, 5, 10, 15, 30 minutes, 1, 8, 24 hours, and manual (maximum 200 hours)				
Measurement level range	A-weighting: 28 to 138 dB, C-weighting: 33 to 138 dB, FLAT: 38 to 138 dB				
	C-weighted peak sound level: 55 to 141 dB, FLAT characteristics peak sound level: 60 to 141 dB				—
Inherent noise	A-weighting: 20 dB or less (Typ.17 dB), C-weighting: 25 dB or less, FLAT: 30 dB or less		A-weighting: 22 dB or less (Typ.19 dB), C-weighting: 27 dB or less, FLAT: 32 dB or less		
Linearity range	100 dB				
Level range selection	20 to 80 dB, 20 to 90 dB, 20 to 100 dB, 20 to 110 dB, 30 to 120 dB, 40 to 130 dB (6 ranges in 10-dB steps)				
Frequency range (including microphone)	20 Hz to 20 kHz		20 Hz to 8 kHz		
	Electrical circuit (AC output)	10 Hz to 20 kHz		10 Hz to 14 kHz	
Electrical circuit characteristics (detector)	10 Hz to 20 kHz		10 Hz to 14 kHz		
Frequency weighting characteristics	A-weighting, C-weighting, Flat				
rms detection	Performed with digital processing				
	Time weighting characteristics (dynamic characteristics)	Fast, Slow, Impulse (Impulse selectable only as auxiliary processing function)			Fast, Slow
Acoustic calibration	Using sound level calibrator NC-74				
Back-erase function	Data for 5-second interval before pressing Pause button can be excluded				
Processing	Digital				
	Sampling frequency	20.8 μ s (L_{eq} , L_{max} , L_{min} , L_E), 100 ms (L_N)		30.3 μ s (L_{eq} , L_{max} , L_{min} , L_E), 100 ms (L_N)	
Data store functions	Manual store in internal memory or on memory card (selectable), auto store when memory card is inserted				Store in internal memory only
	Manual store	Store sound level, processed values, store time, processing start time in internal memory or on memory card (max. 100 data sets)			Manual store only
	Auto store 1	Continuously store sound level (every 100 msec, 200 msec, 1 sec) of L_{Aeq} (every 1 sec) on memory card, with timer function			
Auto store 2	Continuously store main and sub processing values and processing start time information at preset measurement intervals on memory card, with timer function				
Microphone	1/2 inch electret condenser microphone				
	Model (sensitivity level)	UC-53A (-28 dB)		UC-52 (-33 dB)	
	Pre-amplifier	NH-21			
Display	LCD with LED backlight (128 x 64 dots + 121 icons), display contents: numeric and bar graph indication of sound level Combined display of all processed values, L-T screen (real-time level recording with 20-second horizontal axis) Menu screen display for operation				
Outputs	AC/DC jack (menu selectable), AC output: 1 Vrms (full scale), DC output: 2.5 V (full scale), 0.25 V/10 dB				
I/O connector	RS-232C, USB	RS-232C	RS-232C, USB	RS-232C	RS-232C
	Sound level measurement control from a computer, output of data to computer or printer (optional DPU-414/CP-11/CP-10)				
Comparator output	Activated when preset threshold level (30 to 130 dB in 1-dB steps) is exceeded (comparator output)				—
Power requirements	Four IEC R6P (size AA) batteries (LR6 or R6PU), AC adapter (Option: NC-34, NC-98B)				
	Battery life	Backlight off (battery life is reduced to about 1/2 when backlight is on), main processing on, sub processing off, options not used			
	LR6 (alkaline batteries)	Approx. 24 hours	Approx. 29 hours	Approx. 30 hours	Approx. 32 hours
R6PU (manganese batteries)	Approx. 10 hours	Approx. 10 hours	Approx. 11 hours	Approx. 12 hours	Approx. 14 hours
Ambient temperature for use	-10 to +50 °C, 10 to 90 % RH (no condensation)				
Dimensions, weight	Approx. 260 x 76 x 33 mm, approx. 400 g (including batteries)				
Supplied accessories	Windscreen WS-10 x 1, carrying case, IEC R6P (size AA) R6PU battery (manganese) x 4, hand strap, connector cover				



Spécifications détaillées NA-28

Applicable specifications	Sound level meter: Measurement method precision sound level meter IEC 61672-1:2002 Class 1 IEC 61260:1995 Class 1 ANSI S1.4-1963 Type 1 ANSI S1.43-1997 Type 1 ANSI S1.11-2004 Class 1 JIS C 1509-1:2005 Class 1 JIS C 1513:2002 Class 1 JIS C 1514:2002 Class 1				
Measurement functions	With both a sound level meter mode and analyzer mode, it is capable of simultaneous main channel and sub-channel measurement in either mode. Time and frequency weighting are set separately for the main and sub-channels.				
Measurement modes	<table border="1"> <tr> <td>Sound level meter mode</td> <td>Measurement of all-pass values indicated in the measurement items below in the main or sub-channel Measurement of either L_{peak} or L_{max} in the sub-channel</td> </tr> <tr> <td>Analyzer mode</td> <td>Real-time octave and 1/3 octave band analysis and all-pass measurement in the main channel Only all-pass measurement in the sub-channel</td> </tr> </table>	Sound level meter mode	Measurement of all-pass values indicated in the measurement items below in the main or sub-channel Measurement of either L_{peak} or L_{max} in the sub-channel	Analyzer mode	Real-time octave and 1/3 octave band analysis and all-pass measurement in the main channel Only all-pass measurement in the sub-channel
Sound level meter mode	Measurement of all-pass values indicated in the measurement items below in the main or sub-channel Measurement of either L_{peak} or L_{max} in the sub-channel				
Analyzer mode	Real-time octave and 1/3 octave band analysis and all-pass measurement in the main channel Only all-pass measurement in the sub-channel				
Measurement items	Simultaneous measurement of all items in the selected time weighting and frequency weighting characteristics 1) Instantaneous sound pressure level L_p 2) Equivalent continuous sound pressure level L_{eq} 3) Sound exposure level L_E 4) Maximum sound pressure level L_{max} APMax and BandMax can be selected as maximum 5) Minimum sound pressure level L_{min} 6) Maximum 5 time ratio sound levels L_N (1 to 99 %, 1 % Step) Calculation from L_p or L_{eq} , 1sec. One of the following is possible in the sub-channel in the sound level meter mode: Peak sound level L_{peak} Takt-max sound pressure level L_{max} Frequency weighting characteristics are the same as sub-channel				
Measurement time	1 to 59 sec, 1 to 59 min, 1 to 24 hours				
Microphone and preamplifier	Microphone: UC-59 Sensitivity: -27 dB+2 dB (1 V/Pa = 0 dB) Preamplifier: NH-23				
Measurement range	A 25 dB to 130 dB C 33 dB to 130 dB Z 38 dB to 130 dB				
Total range (A-characteristics, 1 kHz)	25 dB to 140 dB				
Maximum peak sound level measurement	143 dB				
Inherent noise	A 17 dB or less C 25 dB or less Z 30 dB or less				
Frequency range	10 Hz to 20 kHz				
Analysis frequency range	<table border="1"> <tr> <td>Octave analysis</td> <td>16 Hz to 16 kHz</td> </tr> <tr> <td>1/3 octave analysis</td> <td>12.5 Hz to 20 kHz</td> </tr> </table>	Octave analysis	16 Hz to 16 kHz	1/3 octave analysis	12.5 Hz to 20 kHz
Octave analysis	16 Hz to 16 kHz				
1/3 octave analysis	12.5 Hz to 20 kHz				
Frequency weighting	A, C and Z				
Time weighting	<table border="1"> <tr> <td>Main channel</td> <td>F (Fast), S (Slow), 10 ms</td> </tr> <tr> <td>Sub-channel</td> <td>F (Fast), S (Slow), 10 ms, Impulse</td> </tr> </table>	Main channel	F (Fast), S (Slow), 10 ms	Sub-channel	F (Fast), S (Slow), 10 ms, Impulse
Main channel	F (Fast), S (Slow), 10 ms				
Sub-channel	F (Fast), S (Slow), 10 ms, Impulse				
Linear operating range	<table border="1"> <tr> <td>All-pass (A-characteristics)</td> <td>110 dB</td> </tr> <tr> <td>Spectrum</td> <td>95 dB</td> </tr> </table>	All-pass (A-characteristics)	110 dB	Spectrum	95 dB
All-pass (A-characteristics)	110 dB				
Spectrum	95 dB				
Level range	<table border="1"> <tr> <td>Sound level meter mode</td> <td>Bar graph display range: maximum 110 dB 30 dB to 130 dB 20 dB to 120 dB 20 dB to 110 dB 20 dB to 100 dB 20 dB to 90 dB 20 dB to 80 dB</td> </tr> <tr> <td>Analyzer mode</td> <td>Bar graph display range: 90 dB 40 dB to 130 dB 30 dB to 120 dB 20 dB to 110 dB 10 dB to 100 dB 0 dB to 90 dB -10 dB to 80 dB</td> </tr> </table>	Sound level meter mode	Bar graph display range: maximum 110 dB 30 dB to 130 dB 20 dB to 120 dB 20 dB to 110 dB 20 dB to 100 dB 20 dB to 90 dB 20 dB to 80 dB	Analyzer mode	Bar graph display range: 90 dB 40 dB to 130 dB 30 dB to 120 dB 20 dB to 110 dB 10 dB to 100 dB 0 dB to 90 dB -10 dB to 80 dB
Sound level meter mode	Bar graph display range: maximum 110 dB 30 dB to 130 dB 20 dB to 120 dB 20 dB to 110 dB 20 dB to 100 dB 20 dB to 90 dB 20 dB to 80 dB				
Analyzer mode	Bar graph display range: 90 dB 40 dB to 130 dB 30 dB to 120 dB 20 dB to 110 dB 10 dB to 100 dB 0 dB to 90 dB -10 dB to 80 dB				
Sampling frequency	<table border="1"> <tr> <td>L_{eq}, L_E, L_{max}, L_{min}, L_{peak}</td> <td>15.6 μs (20.8 μs for octave, 1/3 octave simultaneous analysis)</td> </tr> <tr> <td>L_N</td> <td>100 ms</td> </tr> </table>	L_{eq} , L_E , L_{max} , L_{min} , L_{peak}	15.6 μ s (20.8 μ s for octave, 1/3 octave simultaneous analysis)	L_N	100 ms
L_{eq} , L_E , L_{max} , L_{min} , L_{peak}	15.6 μ s (20.8 μ s for octave, 1/3 octave simultaneous analysis)				
L_N	100 ms				
Correction functions	<table border="1"> <tr> <td>Windscreen correction function</td> <td>Correction of frequency characteristics in order to comply with standards (IEC 61672-1) when the windscreen is mounted Correction function on/off operation implemented on the menu screen</td> </tr> <tr> <td>Diffuse sound field correction function</td> <td>Correction of frequency characteristics in order to comply with standards (ANSI S1.4) in diffuse sound fields Correction function on/off operation implemented on the menu screen</td> </tr> </table>	Windscreen correction function	Correction of frequency characteristics in order to comply with standards (IEC 61672-1) when the windscreen is mounted Correction function on/off operation implemented on the menu screen	Diffuse sound field correction function	Correction of frequency characteristics in order to comply with standards (ANSI S1.4) in diffuse sound fields Correction function on/off operation implemented on the menu screen
Windscreen correction function	Correction of frequency characteristics in order to comply with standards (IEC 61672-1) when the windscreen is mounted Correction function on/off operation implemented on the menu screen				
Diffuse sound field correction function	Correction of frequency characteristics in order to comply with standards (ANSI S1.4) in diffuse sound fields Correction function on/off operation implemented on the menu screen				
Display	Color semi-transparent TFT-LCD display with backlight (240 x 320 dots)				
Refresh cycle	100 ms				
Trigger	Controls measurement and memory storage start.				
Level 1	Measurement starts with the trigger level (1 dB intervals) as threshold and stops when the set measurement times elapses. Slope +/- is set.				
Level 2	1 time only measurement when the trigger level is exceeded.				
External	Starts when a falling signal in the logic level of the external trigger terminal is detected.				
Time	Sets start/stop time and trigger repeat interval.				
Delay time	After the start key is pressed, the time until the start of the measurement or trigger detection is set.				
Time setting	1 sec intervals within the range of 0 to 10 sec				
Back erase function	Measurement is temporarily suspended by pressing the pause key and the previous 5 seconds of data is eliminated from the calculation.				
Storage	The sound level or calculation results are recorded in the manual or auto-store mode. Data is recorded either in the internal memory or CF card. Internal memory has 1 block and it is possible to select either manual storage or auto-storage 1, 2.				

* Specification subject to change without notice.

Manual store	Manual recording of measurement results per address together with the measurement start time														
Record data count	<table border="1"> <tr> <td>Internal memory</td> <td>Maximum 1 000 sets</td> </tr> <tr> <td>CF card*</td> <td>Maximum 1 000 sets per storefile name, maximum 100 storefiles can be stored</td> </tr> </table>	Internal memory	Maximum 1 000 sets	CF card*	Maximum 1 000 sets per storefile name, maximum 100 storefiles can be stored										
Internal memory	Maximum 1 000 sets														
CF card*	Maximum 1 000 sets per storefile name, maximum 100 storefiles can be stored														
Auto store	Continuous recording of measurement results at the set time interval (It is possible to append 4 types of marker data in order to be able to identify events that occur while recording) Pause does not function during auto-storage														
Auto 1	<table border="1"> <tr> <td>Measurement time</td> <td>Maximum time: 1 000 hours (when using the CF card, refer to the following if using internal memory)</td> </tr> <tr> <td>Sound level meter mode</td> <td>Continuous recording in the CF card every 100 ms of L_p, L_{eq}, L_{max} and L_{min} as 1 set It is not possible to record sub-channel measurement results.</td> </tr> <tr> <td>Sampling cycle when using internal memory</td> <td>100 ms (L_p, L_{eq}, L_{max}, L_{min}) only Maximum time: 3 hours</td> </tr> <tr> <td>Analyzer mode</td> <td>Continuous recording in CF card instantaneous sound pressure level (L_p) in each band level and all-pass values</td> </tr> <tr> <td>Main channel</td> <td>All-pass values and band level values</td> </tr> <tr> <td>Sub-channel</td> <td>All-pass values only</td> </tr> <tr> <td>Sampling cycle when using internal memory</td> <td>1 ms to 1 sec, L_{eq}, 1s Maximum 10 000 sets (1 sec or, for L_{eq}, 2.7 hours)</td> </tr> </table>	Measurement time	Maximum time: 1 000 hours (when using the CF card, refer to the following if using internal memory)	Sound level meter mode	Continuous recording in the CF card every 100 ms of L_p , L_{eq} , L_{max} and L_{min} as 1 set It is not possible to record sub-channel measurement results.	Sampling cycle when using internal memory	100 ms (L_p , L_{eq} , L_{max} , L_{min}) only Maximum time: 3 hours	Analyzer mode	Continuous recording in CF card instantaneous sound pressure level (L_p) in each band level and all-pass values	Main channel	All-pass values and band level values	Sub-channel	All-pass values only	Sampling cycle when using internal memory	1 ms to 1 sec, L_{eq} , 1s Maximum 10 000 sets (1 sec or, for L_{eq} , 2.7 hours)
Measurement time	Maximum time: 1 000 hours (when using the CF card, refer to the following if using internal memory)														
Sound level meter mode	Continuous recording in the CF card every 100 ms of L_p , L_{eq} , L_{max} and L_{min} as 1 set It is not possible to record sub-channel measurement results.														
Sampling cycle when using internal memory	100 ms (L_p , L_{eq} , L_{max} , L_{min}) only Maximum time: 3 hours														
Analyzer mode	Continuous recording in CF card instantaneous sound pressure level (L_p) in each band level and all-pass values														
Main channel	All-pass values and band level values														
Sub-channel	All-pass values only														
Sampling cycle when using internal memory	1 ms to 1 sec, L_{eq} , 1s Maximum 10 000 sets (1 sec or, for L_{eq} , 2.7 hours)														
Auto 2	<table border="1"> <tr> <td>Sound level meter mode</td> <td>Continuous recording in CF card of main channel and sub-channel all-pass values and measurement start time for each measurement time</td> </tr> <tr> <td>Analyzer mode</td> <td>Continuous recording in CF card of main channel band levels and all-pass values and sub-channel all-pass values and measurement start time for each measurement time</td> </tr> <tr> <td>Record data count</td> <td>Internal memory: Maximum 1 000 sets CF card: Maximum 300 000 sets</td> </tr> </table>	Sound level meter mode	Continuous recording in CF card of main channel and sub-channel all-pass values and measurement start time for each measurement time	Analyzer mode	Continuous recording in CF card of main channel band levels and all-pass values and sub-channel all-pass values and measurement start time for each measurement time	Record data count	Internal memory: Maximum 1 000 sets CF card: Maximum 300 000 sets								
Sound level meter mode	Continuous recording in CF card of main channel and sub-channel all-pass values and measurement start time for each measurement time														
Analyzer mode	Continuous recording in CF card of main channel band levels and all-pass values and sub-channel all-pass values and measurement start time for each measurement time														
Record data count	Internal memory: Maximum 1 000 sets CF card: Maximum 300 000 sets														
Data recall	Stored data access and time/level display (selected frequency band 1 only)														
Memory store of settings	Maximum 5 sets of settings can be stored in internal memory and retrieved Start-up is possible under file setting conditions stored in the CF card in advance.														
Printout	Measurement results can be printed using the special USB printer(Optional)														
Screen print mode	1-page printing of the displayed screen														
Memory print mode	Continuous printing of data in the specified address range in memory														
Input/output	<table border="1"> <tr> <td>AC output</td> <td>Selection and output of all-pass signals of either the main channel or sub-channel Output voltage: 1 V (effective value) at range full scale Output resistance: 600 Ω Load resistance: 10 kΩ or more</td> </tr> <tr> <td>DC output</td> <td>Selection and output of all-pass signals of either the main channel or sub-channel Output voltage: 3.0 V, 25 mV/dB at range full scale Output resistance: 50 Ω Load resistance: 10 kΩ or more</td> </tr> <tr> <td>Comparator output</td> <td>Open collector output. Determination is also possible at the band level. The terminal is also used for the external trigger. Maximum applied voltage: 24 V Maximum driving current: 50 mA</td> </tr> <tr> <td>External trigger input</td> <td>Falling edge is detected at 0V to 5 V logic level. The terminal is also used for the comparator.</td> </tr> <tr> <td>USB</td> <td>Besides connection to a PC as a storage device, it is also possible to use communication device class and execute control by communication commands (however, settings relating to the transfer of stored data and storage action are not possible with communication commands). Remote control reception: Control of NA-28 by infrared remote control (remote control NA-27RC1, optional)</td> </tr> </table>	AC output	Selection and output of all-pass signals of either the main channel or sub-channel Output voltage: 1 V (effective value) at range full scale Output resistance: 600 Ω Load resistance: 10 k Ω or more	DC output	Selection and output of all-pass signals of either the main channel or sub-channel Output voltage: 3.0 V, 25 mV/dB at range full scale Output resistance: 50 Ω Load resistance: 10 k Ω or more	Comparator output	Open collector output. Determination is also possible at the band level. The terminal is also used for the external trigger. Maximum applied voltage: 24 V Maximum driving current: 50 mA	External trigger input	Falling edge is detected at 0V to 5 V logic level. The terminal is also used for the comparator.	USB	Besides connection to a PC as a storage device, it is also possible to use communication device class and execute control by communication commands (however, settings relating to the transfer of stored data and storage action are not possible with communication commands). Remote control reception: Control of NA-28 by infrared remote control (remote control NA-27RC1, optional)				
AC output	Selection and output of all-pass signals of either the main channel or sub-channel Output voltage: 1 V (effective value) at range full scale Output resistance: 600 Ω Load resistance: 10 k Ω or more														
DC output	Selection and output of all-pass signals of either the main channel or sub-channel Output voltage: 3.0 V, 25 mV/dB at range full scale Output resistance: 50 Ω Load resistance: 10 k Ω or more														
Comparator output	Open collector output. Determination is also possible at the band level. The terminal is also used for the external trigger. Maximum applied voltage: 24 V Maximum driving current: 50 mA														
External trigger input	Falling edge is detected at 0V to 5 V logic level. The terminal is also used for the comparator.														
USB	Besides connection to a PC as a storage device, it is also possible to use communication device class and execute control by communication commands (however, settings relating to the transfer of stored data and storage action are not possible with communication commands). Remote control reception: Control of NA-28 by infrared remote control (remote control NA-27RC1, optional)														
Power supply	Four IEC R14P (size "C") batteries or external power supply														
Operating time (20 °C, normal operating conditions)	When following not functioning: sub-channel, backlight, AC output, DC output, USB function, remote-control, autostore														
Manganese batteries	R14PU, 6 hours														
Alkaline batteries	LR14, 16 hours (10 hours if backlight is continuously activated)														
AC adapter	NC-94A														
External power supply voltage	5 V to 7 V (rated voltage: 6 V)														
Consumption current	240 mA (during normal operation at rated voltage)														
Ambient conditions for operation	-10 °C to +50 °C, 10 %RH to 90 %RH														
Dimensions, weight	331 (H) x 89 (W) x 51 (D) mm, approx. 730 g (including batteries)														
Supplied accessories	Memory card (128 MB) MC-12CF1 x 1, Storage case x 1, Soft case x 1, AC adapter NC-94A x 1, Windscreen WS-10 x 1, BNC-RCA cable CC-24 x 1, Strap x 1, IEC R14P (size "C") batteries (alkaline) x 4														

Options

name	model
Remote control	NA-27RC1
Sound calibrator	NC-74
Memory card	64 MB, 128 MB, 256 MB, 1 GB, 2 GB
USB printer	BL-112UI

name	model
Printer paper(10 rolls/pkg)	P-112-30
USB miniB-B cable	CC-97
Battery pack	BP-21
Dual output adaptor	CC-59S01

* Use only RION supplied cards for assured operation.



ISO 14001 RION CO., LTD.
ISO 9001 RION CO., LTD.



02 38 87 45 35



02 38 87 41 33



info@viaxys.com



www.viaxys.com

76, La Rivière
45 490 SCEAUX DU GATINAIS